

## Technical data sheet

### Modular connection unit

Part no.: 50114154  
MA 235i CANopen Gateway

#### Contents

- Technical data
- Electrical connection
- Operation and display
- Accessories



For illustration purposes only



## Technical data

### Basic data

<b>Series</b>	MA 2xxi
<b>Suitable for</b>	BCL 2x series bar code readers BCL 8 series bar code readers BPS 8 series bar code positioning system DCR 200i series stationary 2D-code readers FIS series mobile 2D-code readers HFxx series mobile RFID read/write systems HS 65x8 IT 1900g series mobile 2D-code readers IT 1902g series mobile 2D-code readers IT 1910 series mobile 2D-code readers IT 1911i series mobile 2D-code readers LSIS 222 series stationary 2D-code readers RFI RFM

### Electrical data

<b>Performance data</b>	
<b>Supply voltage U<sub>B</sub></b>	18 ... 30 V, DC
<b>Current consumption, max.</b>	300 mA

### Interface

<b>Type</b>	RS 232, CANopen
-------------	-----------------

### Connection

<b>Number of connections</b>	6 Piece(s)
<b>Connection 1</b>	
<b>Function</b>	Connection to device
<b>Type of connection</b>	Plug connector
<b>Connection 2</b>	
<b>Function</b>	BUS OUT
<b>Type of connection</b>	Connector
<b>Thread size</b>	M12
<b>Type</b>	Female
<b>Material</b>	Plastic
<b>No. of pins</b>	4 -pin
<b>Encoding</b>	D-coded
<b>Connection 3</b>	
<b>Function</b>	BUS IN
<b>Type of connection</b>	Connector
<b>Thread size</b>	M12
<b>Type</b>	Female
<b>Material</b>	Metal
<b>No. of pins</b>	4 -pin
<b>Encoding</b>	D-coded

### Connection 4

<b>Function</b>	Voltage supply
<b>Type of connection</b>	Connector
<b>Thread size</b>	M12
<b>Type</b>	Male
<b>Material</b>	Metal
<b>No. of pins</b>	5 -pin
<b>Encoding</b>	A-coded

### Connection 5

<b>Function</b>	Voltage supply
<b>Type of connection</b>	Connector
<b>Thread size</b>	M12
<b>Type</b>	Male
<b>Material</b>	Metal
<b>No. of pins</b>	5 -pin
<b>Encoding</b>	A-coded

### Connection 6

<b>Function</b>	Service interface
<b>Type of connection</b>	Sub-D
<b>No. of pins</b>	9 -pin

### Mechanical data

<b>Design</b>	Cubic
<b>Dimension (W x H x L)</b>	107 mm x 40 mm x 180 mm
<b>Housing material</b>	Metal
<b>Net weight</b>	700 g
<b>Housing color</b>	Red, RAL 3000
<b>Type of fastening</b>	Through-hole mounting

### Operation and display

<b>Type of display</b>	LED
<b>Number of LEDs</b>	2 Piece(s)

### Environmental data

<b>Ambient temperature, operation</b>	0 ... 55 °C
<b>Ambient temperature, storage</b>	-20 ... 60 °C
<b>Relative humidity (non-condensing)</b>	5 ... 90 %

### Certifications

<b>Degree of protection</b>	IP 65
<b>Approvals</b>	c UL US

## Technical data

Customs tariff number	85176200
ECLASS 5.1.4	27379201
ECLASS 8.0	27379201
ECLASS 9.0	27069190
ECLASS 10.0	27069190
ECLASS 11.0	27069090
ECLASS 12.0	27069090
ECLASS 13.0	27069090
ECLASS 14.0	27069090
ECLASS 15.0	27069090
ECLASS 16.0	27069090
ETIM 5.0	EC001855
ETIM 6.0	EC001855
ETIM 7.0	EC001855
ETIM 8.0	EC001855
ETIM 9.0	EC001855
ETIM 10.0	EC001855
UNSPSC 26.08	26121600

## Electrical connection

### Connection 1

### Leuze device

Function	Connection to device
Type of connection	Plug connector
No. of pins	10 pins -pin
	12 pins -pin
	6 pins -pin

### Connection 2

### BUS OUT

Function	BUS OUT
Type of connection	Connector
Thread size	M12
Type	Female
Material	Plastic
No. of pins	4 -pin
Encoding	D-coded

### Pin Pin assignment

1	TD+
2	RD+
3	TD-
4	RD-

### Connection 3

### BUS IN

Function	BUS IN
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

## Electrical connection

Pin	Pin assignment
1	TD+
2	RD+
3	TD-
4	RD-

Connection 4	PWR
Function	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	VCC
2	SWIO 2
3	GND
4	SWIO 1
5	FE

Connection 5	PWR
Function	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	V_IN
2	SWIO 2
3	GND
4	SWIO 1
5	FE

Connection 6	SERVICE
Function	Service interface
Type of connection	Sub-D
No. of pins	9 -pin
Type	Male

## Electrical connection



Pin	Pin assignment
1	n.c.
2	RxD Service
3	TXD service
4	n.c.
5	GND
6	n.c.
7	n.c.
8	n.c.
9	n.c.

## Operation and display

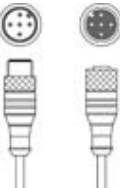
LED	Display	Meaning
1	Green, continuous light	BUS OK
	Red, continuous light	Bus error
2	Green, continuous light	Operational readiness
	Red, continuous light	Device error
3	Off	None.
	Off	None.
4	Off	None.
	Off	None.

## Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50114696	KB DN/CAN-5000 BA	Connection cable	Application: Oil and lubricant resistant Suitable for interface: DeviceNet, CANopen Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50132079	KD U-M12-5A-V1-050	Connection cable	Application: Chemical resistant Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

### Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50114698	KB DN/CAN-5000 SBA	Interconnection cable	Application: Chemical resistant Suitable for interface: DeviceNet, CANopen Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Female, A-coded, 5 -pin Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## Accessories

	Part no.	Designation	Article	Description
	50133298	KDS U-M12-5A-M12-5A-V1-050	Interconnection cable	Application: Chemical resistant Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: No Cable length: 5,000 mm Sheathing material: PVC

## Connection technology - Terminating resistors

	Part no.	Designation	Article	Description
	50040099	TS 01-5-SA	Terminator plug	Suitable for: DeviceNet, CANopen Function: Bus termination Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin

**Note**

A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.