MA 2/MA 2 L Connector unit for BCL 21/22, BCL 31/32, VR 2300, RF Ident

- MA 2 may be used with BCL 21/22, BCL 31/ 32, VisionREADER 2300, and RF Ident devices
- MA 2 L may be used with BCL 31/32 and VisionREADER 2300
- The BCL 31/32 may be plugged directly onto the MA 2 L
- Networking of several BCL 21 or BCL 31 via RS485 interface, hardware addressing in Leuze multiNetplus
- Additional RS232 service interface (9-pin sub D connector), operating mode switch service/standard operation
- Terminals for switching inputs and outputs including power supply and for looping through of the the RS 485 line (BCL 21/31)
- Rotary switch for address setting

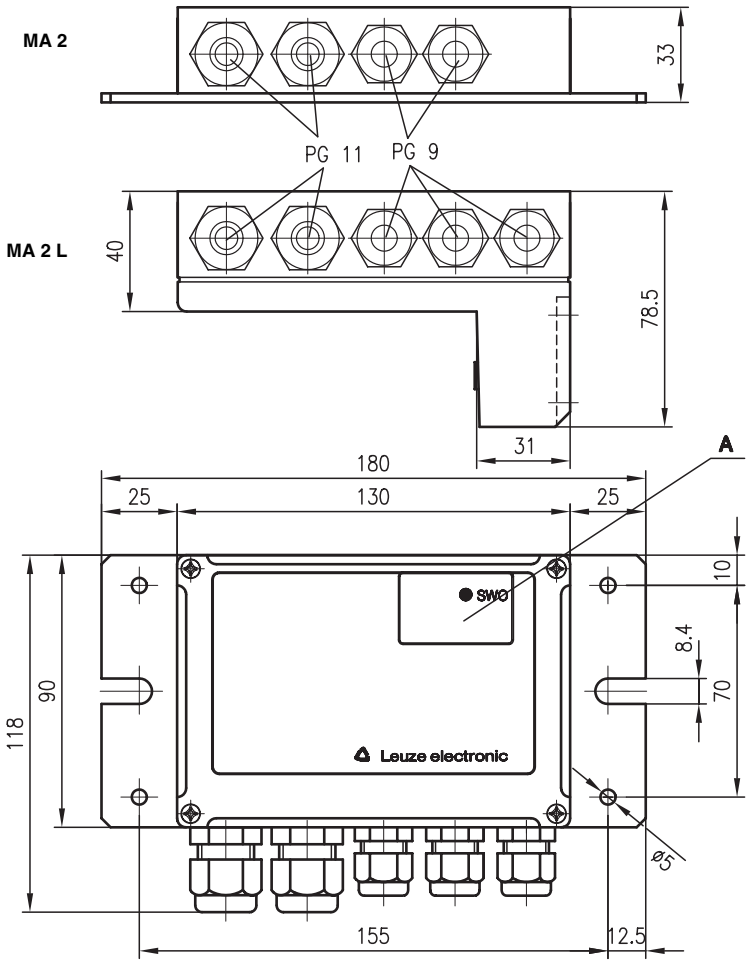
IP 54 IEC 801...

Accessories:

(available separately)

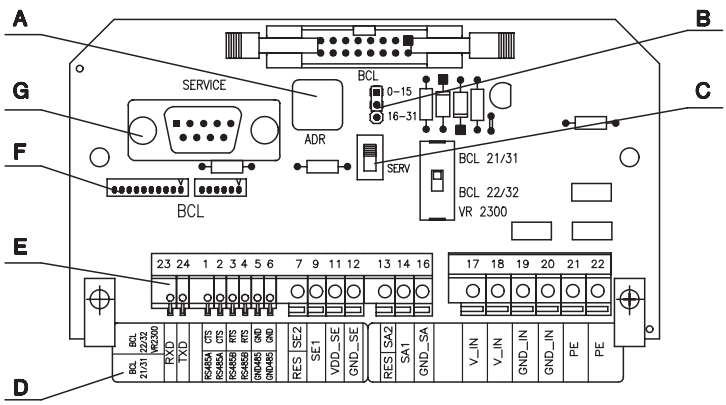
- Bar code reader BCL 21/22, BCL 31/32, VisionREADER 2300, RFM, RFI
- Cable KB 031-3000 for connection between BCL 31/32, VR2300, and MA 2
- Cable KB 040 for connection between BCL 31/32, VR2300, and MA 2

Dimensioned drawing



A LED indicator

Electrical Connection



A Setting of the device address
B Device address adjustment 0-15 or 16-31
C Service/operation switch
D Attached label with terminal designation
E Terminal strip
F Connection BCL
G Service interface

Specifications

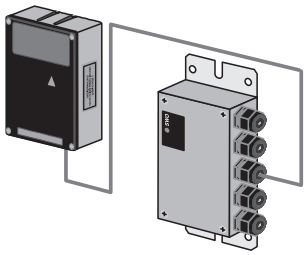
	MA 2	MA 2 L
Electrical data		
Operating voltage U_B[1)]	Please observe the voltage specifications of the respective Leuze identification system	
Power consumption	0.1 VA	
Switching input	Please observe the voltage specifications of the respective Leuze identification system	
Switching output	I_{max} = 100 mA output voltage ≡ operating voltage	
Mechanical data		
Housing	diecast aluminium	
Housing cover	sheet steel	diecast aluminium
Weight	660 g	575 g
Connection type	cable with connector KB 031	cable with connector KB 040
Environmental data		
Ambient temp. (operation/storage)	-10°C … +50°C/-20°C … +60°C	
Protection class	IP 54	
Valid standards document	IEC 801	
Air humidity	max. 90% rel. humidity, non-condensing	
Indicators		
LED green	switch 1	

1) Please observe the voltage specifications of the respective Leuze identification system

Description

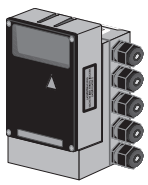
The MA 2 or MA 2 L is a connector unit for the BCL 21/22, BCL 31/32, VisionREADER 2300 and RF Ident devices. It significantly simplifies both the electrical installation and the commissioning and maintenance of the respective device. In addition, it permits the networking of several identification systems. The figure shows the combination of the connector unit and a BCL device.

MA 2



All BCL 21/22 from software version 02.00 onwards may be connected to the MA 2. All BCL 31/32, VisionREADER und RF Ident devices with a cable length of up to 3m may be connected to the MA 2/MA 2 L. The data are coded in the BCL identifier as follows:

MA 2 L



BCL 21/22 **XYZ**

The connector type is coded at the **X** location:

X = 2: circuit board connector

The length of the connection cable used is coded at the **Y** location:

Y = 0: 0.8m connection cable

Y = 1: 3m connection cable

The BCL 31/32 and the VR2300 are connected via KB 031 3000 to the MA 2 or directly (or with KB 040) to the MA 2 L.

RF Ident devices are connected to the MA 2 via the cable integrated into the unit.

Order guide

	Type	Order code
Connector unit for BCL 21/22, BCL 31/32	MA 2	500 31256
Connector unit for VR2300, RFI, RFM	MA 2	500 31256
Connector unit for BCL 31/32, VR2300	MA 2 L	500 36186

Tables

Remarks

- The scanner must not be plugged in if the power is on.

MA 2/MA 2 L

Operational controls and Connection

Setting the network address

Rotary switch	position 0: operation with BCL 22, BCL 32, VR2300, RFI, RFM position 1 to F: multiNet slave address
Jumper	top: low address range 0 … 15 bottom: high address range 16 … 31

Interface mode

DIP switch	SERV: service interface active/ host interface deactivated BETR: host interface active

Service connector

Sub-D connector, 9 pin	RS 232 interface for service/ setup operation standard data format: 9600 baud, 8 data bits, 1 stop bit, no parity 2=RxD, 3=TxD, 5=GND, 7=RTS, 8=CTS

Connector for BCL and VR2300

MA 2: circuit board connector	connection for BCL, VR2300, RF Ident devices
MA 2 L: 15 pin Sub-D connector	direct connection for BCL 31/32 through plugging onto the MA 2 L

RS 232 interface

The RS232 interface is not floating.

Terminal 23	RxD in connection with BCL 22, BCL 32, VR2300 and RF Ident
Terminal 24	TxD in connection with BCL 22, BCL 32, VR2300 and RF Ident
Terminals 5-6	GND in connection with BCL 22, BCL 32, VR2300 and RF Ident

RS 485 interface

The RS 485 interface connections are implemented twice, for insertion.
The RS 485 interface is not floating.

	Signal BCL 21, BCL 31	**Signal BCL 22, BCL 32, VR2300**
Terminals 1-2	RS 485 A	CTS
Terminals 3-4	RS 485 B	RTS
Terminals 5-6	RS 485 GND	GND

Switching inputs

	Signal BCL 21, BCL 31, RF Ident	**Signal BCL 22, BCL 32, VR2300**
Terminal 7	RES, only 1 switching input present	SE2 – switching input 2, 12 … 30VDC
Terminal 9	SE1 - Switching input 1, 12 … 30VDC	SE1 - Switching input 1, 12 … 30VDC
Terminal 11	VDD_SE - supply voltage, switching input, equal to V_IN device	
Terminal 12	GND_SE - switching input ground, equal to GND_IN device, switching input asymmetric to GND	

Switching outputs

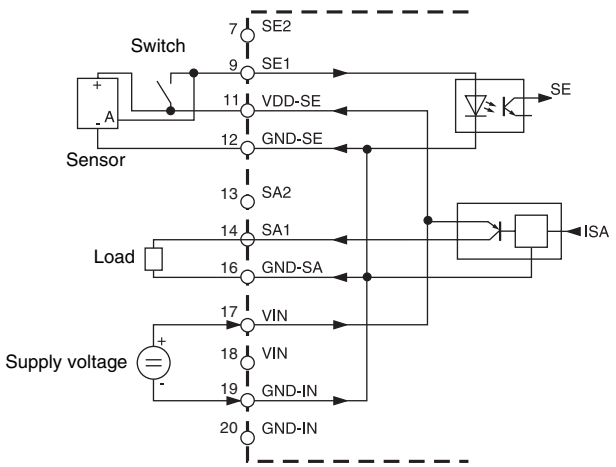
	Signal BCL 21, BCL 31, RF Ident	**Signal BCL 22, BCL 32, VR2300**
Terminal 13	RES, only 1 switching output present	SA2 – switching output 2
Terminal 14	SA1 - switching output 1	SA1 - switching output 1
Terminal 16	GND_SA – external supply voltage switching output 0VDC Load must be connected asymmetrically to GND. The switching voltage for the output is generated by the operating voltage V_IN: VDD_SA = VDD_IN GND_SA = GND_IN	

Operating voltage

Connection terminals for the operating voltage of the MA 2/MA 2 L and for the BCL used.
Dual design of the voltage supply connections for insertion or for the supply of further components.
Attention! PE must be connected for protection against faults!

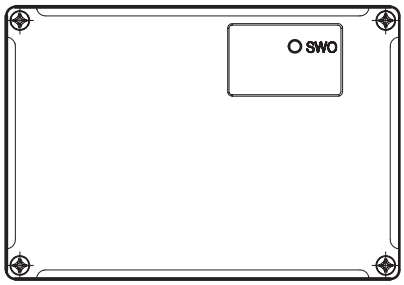
Terminals 17-18	V_IN operating voltage 10 … 30VDC
Terminals 19-20	GND_IN operating voltage 0VDC
Terminals 21-22	PE protective earth, grounding

Circuitry of the connector unit



Indicators

A LED labelled "SWO" is located at the connector unit. It indicates the state of the switching output 1.



In the standard setting, the LED indicates the decoding of a bar code.
Further states of the switching output may be found in the Technical description BCL 21/22, BCL 31/32, VisionREADER 2300 or RF Ident devices.

Overview of the possible device combinations