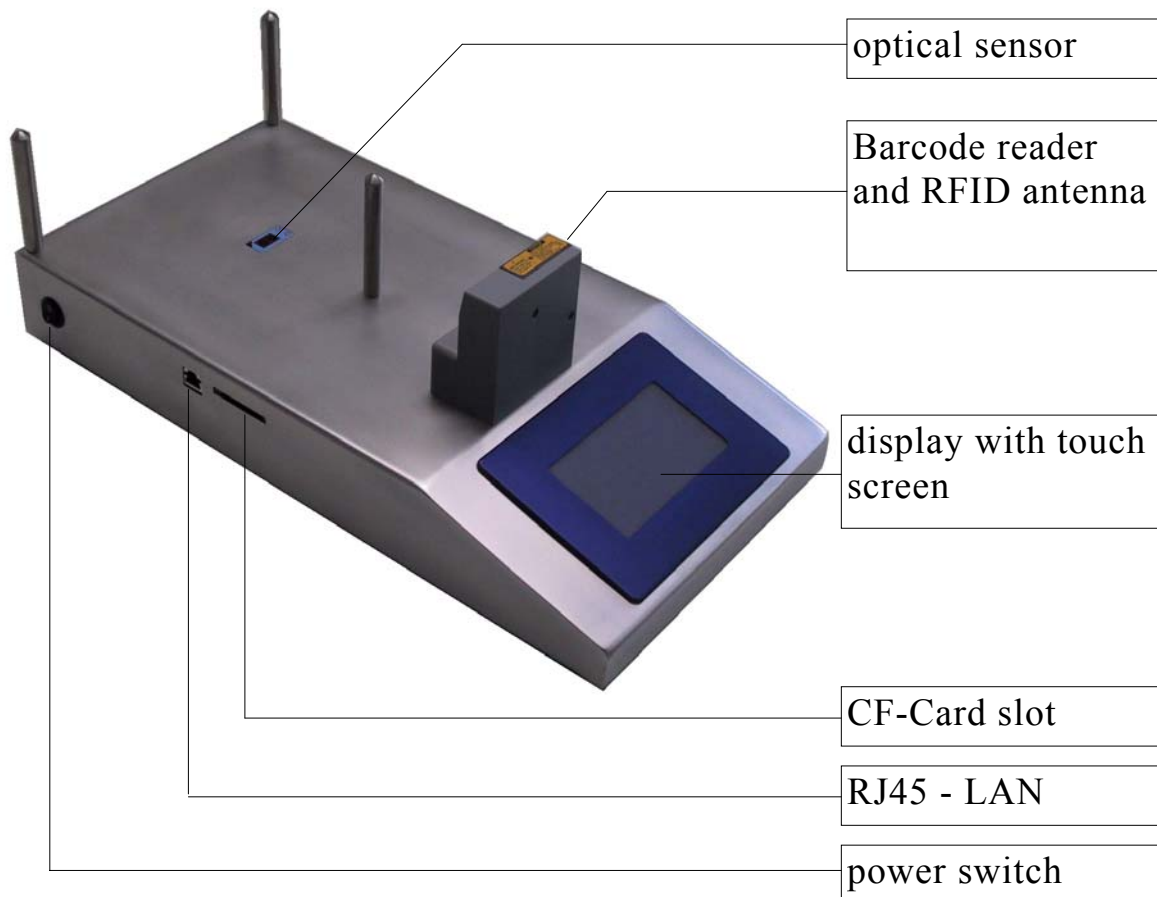


2 PRODUCT OVERVIEW

2.1 SA FOUP Read – Write Station

The unit is composed of a RF tag reader, a barcode reader, an optical sensor, and a 240x128 pixel display with integrated touch screen (10x6 touch areas). It is used to read information from barcodes and write this information to the RF tag. Therefore a FOUP must be placed on the unit, which is detected by an optical sensor.



2.2 Component RF Tag Reader

The Transponder Reader System is a high-frequency identification system that uses FM transmission. The basic item is a transponder that works as a forgery-proof electronic identity disk.

The reading unit of the system sends an energy impulse via the antenna. The capacitor of the passive, battery-free transponder is charged by this impulse. After that, the transponder returns a signal with the stored data. The total reading cycle takes less than 100 ms. As a sight connection between the transponder and the reader is not absolutely necessary, the transponder can also be identified through non-metallic material.

The data received by the transponder reader are transmitted via the serial interface in the unit.

2.3 Component Barcode Reader

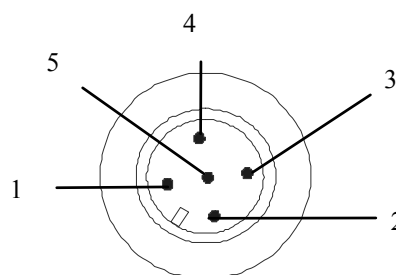
The Barcode Reader is a device, which uses Laser light to read barcodes over a distance between 45 and 175 mm. The sampling rate is about 500 per seconds. The wave length of the Laser diode is 650 nm and the output power is 1,5 mW (CLASS 2 Laser). The user should avoid staring directly into the beam.

4 CONNECTIONS

4.1 Power Connection

Built-in male plug, plastic (power supply)

PIN	Signal
1	+24V
2	0V
3	NC
4	NC
5	NC



The device can be connected to an interior DC power circuit or to a DC adapter.

4.2 RJ-45 Connector (Ethernet interface)

The interface is used to connect the device to LAN network for update the software only. Therefore a FTP program transmits the new files to the flash memory of the station.

5 APPLICATION FLOW

To transfer the FOUP data from barcode label to the RF tag, the FOUP have to be placed on the unit. The optical sensor detects the FOUP and the station will be switched to operation mode. There are different modes to transfer the data from barcode to RF tag.

The Manual Mode for reading the barcode and reading and writing the tag independently from each other.

Automatic Mode and Full Automatic Mode are used to read the barcode and then copy the data to the tag automatically.

In normal case the barcode ID will be read from the FOUP label. After that the ID will be written to the RF tag at the FOUP. Then one or more pages of the tag will be locked and the ID will be stored on a file on the CF card.

6 TECHNICAL DATA

Operation temperature	0°C to 50°C / 32°F to 122°F
Stock temperature	-25°C to 70°C / -13°F to 158°F
Ethernet Connector	RJ-45
CF-Card	min. 32MB
Voltage	18 ... 30 VDC
Current typ. / max.	400 mA / 600 mA (24V)
Wight (without BCR)	7.100 g

RF Reader:

Transmitter frequency	134.2 kHz
Max. transmitting level in 3m distance	104 dB μ V/m
Typ. period of charging impulse	50ms
Max. repeat of reading	4/s
Max. repeat of programming	2/s
Fuse type TR5	500mA (T)
Voltage	13 .. 24 VDC
Reading/writing impulse	160 mA (24V)

Barcode Reader (integrated):

Voltage	5VDC
Laser power	max. 1,5mW
Laser Class	2
Sampling Mode	Raster
Sampling Rate	500 / s
Voltage	5 VDC
Current	max. 330 mA
Wight	130 g

Display (Graphic Device):

Pixels (Blue Line)	240 x 128
Touch Panel Fields	10 x 6
Voltage	5 VDC
Current	700 mA

Version	Änderungen	Datum	Autor
0.1		26.05.03	RW