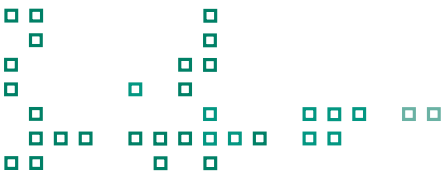
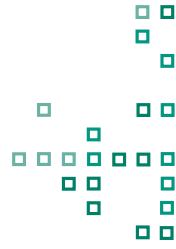




RFID Division

# LF Product Overview RFID Hardware

Frequency 134.2 kHz



## Ready for RFID ?

\* Radio Frequency Identification

- Best read range
- Various interfaces
- Customer-specific protocols on request
- Large number of antennas

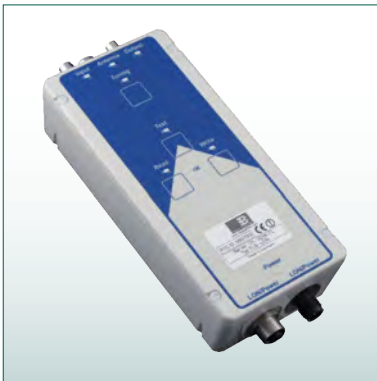
## LF80C ZeniD



- Compatible with TIRIS™ tags
- Membrane keypad
- Test mode for easy installation
- Automatic antenna tuning
- Synchronization with adjacent readers
- Status indication LEDs
- One digital input and output each for triggering and indication
- Second serial interface
- Antenna sockets for LEMO connectors

Protocol	ASCII
RS232 serial interface	300 - 115.2 kBaud
Dimensions	172 x 80 x 43 mm
Weight	440 g
Operating temperature	0°C to 50°C
Storage temperature	-25°C to 70°C
Permissible humidity	25% to 80% at 50°C
Protection class	IP40
Housing material	ABS (UL94-V0)
Voltage	18 - 30 V DC
Current	30 mA
Rod antenna read/write pulse	160 mA
Micro antenna read/write pulse	140 mA
Fuse	400 mA type TR5

## LF80 RFID Reader (LonWorks)



- Protocol: LonTalk
- Compatible with TIRIS™ tags
- Configuration using membrane keypad
- Status indication LEDs
- One digital input and output each for triggering and indication
- Automatic antenna tuning
- Antenna sockets for LEMO connectors

Protocol	LonTalk
Dimensions	172 x 80 x 43 mm
Weight	Approx. 440 g
Operating temperature	0°C to 50°C
Storage temperature	-25°C to 70°C
Permissible humidity	25% to 80% at 50°C
Protection class	IP40
Housing material	ABS (UL94-V0)
Voltage	18 - 30 V DC
Current (without start process)	60 mA
Read/write pulse current	120 mA
Fuse	T 400 mA 250 V

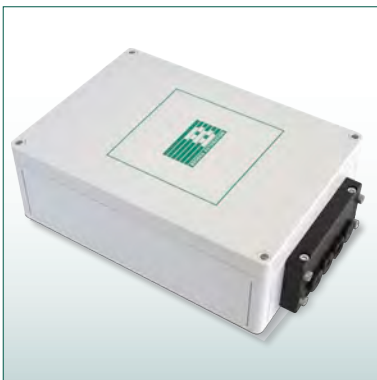
## LF80 RFID Reader (Profibus)



- Protocol: Profibus-DP
- Direct connection to PROFIBUS
- Automatic antenna tuning
- One digital input and output each for triggering and indication
- Second serial interface
- Compatible with TIRIS™ tags
- Incl. GST configuration file
- Antenna sockets for LEMO connectors

Protocol	Profibus-DP
Dimensions	172 x 80 x 43 mm
Weight	440 g
Operating temperature	-25°C to +50°C
Storage temperature	-25°C to 70°C
Protection class	IP40
Housing material	PVC (polyvinyl chloride, white, without lettering)
Voltage	18 - 30 V DC
Current	30 mA
TR5 type fuse	500 mA

## LF70 RFID Reader (Long Range)



- Read ranges up to 100 cm
- Profibus-DP interface
- Suitable for harsh ambient conditions
- Compatible with TIRIS™ tags

Protocol	Profibus-DP
Interface	RS485
Baud rate	9.6 kBaud - 12 MBaud
Read range	Approx. 1070 mm (120 mm read-only transponder)
Write range	Approx. 270 mm (32 mm glass transponder)
Dimensions	180 x 254 x 90 mm
Weight	1600 g
Operating temperature	-20°C to 50°C
Storage temperature	-25°C to 70°C
Permissible humidity	25% to 80% at 50°C
Protection class	IP54
Housing material	Polycarbonate
Voltage	20 - 30 V DC
Current	110 mA passive
Read/write current	Type 140 mA

## LF60C Solid



- Test mode
- Available incl. digital input and output
- Optional RS485/Ethernet
- A variety of protocols can be supplied
- Various antennas available
- Antenna sockets for SMA connectors

Operating temperature	0°C to +50°C
Storage temperature	-20°C to +70°C
Permissible humidity	25% to 80% at 50°C
Protection class	IP40
Housing material	PS
Weight	Approx. 180 g
TR5 type fuse	375 mA (Nano 2)
RS232 serial interface	4800 - 57600 Baud
Voltage	18 - 30 V DC (typ. 24 V DC)
Current (active mode)	80 mA
Current (passive mode)	60 mA
Voltage	18 - 30 V DC

## LF40 RFID Scanner (THR)



- Mobile RFID Handheld Reader
- Recognizes all TIRIS transponders
- Write function on request
- Connection via USB
- Replacement for barcode readers
- Quick to install, pushbutton operation
- Information display in input panel or text document

Output format	ASCII or HEX
Dimensions	Approx. 165 x 110 x 80 mm
Cable length	1500 mm
Weight	220 g
Housing material	ABS
Protection class	IP40
Operating temperature	-25°C to 70°C
Storage temperature	-40°C to 85°C
Voltage	5 V +/- 5%
Current (active mode)	100 mA
Current (passive mode)	40 mA

## LF40 RFID Card (PCMCIA)



- RFID plug-in PC card
- Plug & Play
- GUI for PDA or laptop included
- For HP PDA or Windows laptop
- Versions for various PDAs on request

Operating temperature	0°C to 50°C
Storage temperature	-25°C to 70°C
Permissible humidity	25% to 80% at 50°C
Voltage	5 V +/- 5%
Current (active mode)	100 mA
Current (passive mode)	40 mA
Included in delivery	Software for graphical user interface (GUI)
System requirements	PC card type II for Win9x/2000/NT/XP/CE

## LF40 RFID card (CompactFlash CF)



- RFID plug-in CF card
- Card format CompactFlash CF
- Plug & Play
- Compatible with TIRIS™ tags
- GUI for pocket PC or laptop included
- For HP PDA or Windows laptop
- Versions for various PDAs on request

Antenna	Frame antenna
System requirements	CFC card type I for Win9x/2000/NT/XP/CE
Read range	Approx. 55 mm (32 mm glass tube transponder)
Write range	Approx. 35 mm (32 mm glass tube transponder)
Dimensions	55 x 43 x 3.6 mm
Operating temperature	0°C to 50°C
Storage temperature	-25°C to 70°C
Permissible humidity	25% to 80% at 50°C
Voltage	3.3 V or 5 V
Current (active mode)	100 mA
Current (passive mode)	40 mA
Included in delivery	Software for graphical user interface (GUI)

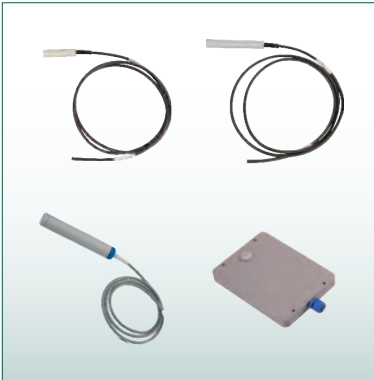
## RFID Test System



- RFID kit for evaluation, ready to use immediately
- Frequency 134.2 kHz
- Incl. RFID reader and RFID card
- Incl. several transponders and antennas
- In sturdy plastic carrying case
- Quick to put into operation

- 1 RS232 Transponder Reader
- 1 frame antenna
- 1 rod antenna
- 1 mini antenna
- 1 micro antenna
- 1 optical sensor
- 1 serial cable
- 1 CFCard Transponder Reader
- 1 power supply cable with adapters
- 1 120 mm Multipage cylindrical transponder
- 2 32 mm Multipage glass transponders
- 1 read/write Wedge transponder
- 1 30 mm read/write Disc transponder
- 1 read-only card transponder
- 1 CD with test software
- 1 CD with sets of documentation

## LF Antennas



	Micro antenna	Mini antenna	Rod antenna	Frame antenna (LF80C only)
Read range				
LF60C SoliD	123 mm	186 mm	256 mm	
LF80C ZeniD	135 mm	187 mm	290 mm	190 mm
Write range				
LF60C SoliD	102 mm	159 mm	231 mm	
LF80C ZeniD	107 mm	167 mm	255 mm	170 mm
Antenna cylinder	40 mm	68 mm	125 mm	-
Antenna cylinder diameter	10 mm	10 mm	23 mm	-
Dimensions	-	-	-	161 x 120 x 19 mm
Total height	-	-	-	70 mm (cable fitted at side)
Total length	60 mm (cable at an angle of 90°)	85 mm (cable at an angle of 90°)	150 mm (cable at an angle of 90°)	210 mm (cable fitted at side)
Antenna housing	PP, light grey	PP, light grey	ABS	PP
Antenna cable diameter	4.1 mm	4.1 mm	5.5 mm	5.5 mm
Bending radius	20 x cable diameter, 6 x once	20 x cable diameter, 6 x once	15 x cable diameter, 6 x once	15 x cable diameter, 6 x once
Cable material	PVC	PVC	PVC	PVC
Operating temperature	0°C to 50°C	0°C to 50°C	0°C to 50°C	0°C to 50°C
Storage temperature	-25°C to 70°C	-25°C to 70°C	-25°C to 70°C	-25°C to 70°C
RoHS compliance	Yes			
Permissible humidity	25% to 80% at 50°C	25% to 80% at 50°C	25% to 80% at 50°C	25% to 80% at 50°C



LEMO connector  
(for LF80C ZeniD)



SMA connector  
(for LF60C SoliD)

## RFID Sales

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