

Description of the MOBY F Identification System, SLG 80 Read-Write Devices with ANT F5, SIM 80 with ANT F5 and MDS 415 Data Memory

1. Read-Write Devices

This section describes the principal setup of the MOBY F read-write devices with HITAG® technology (125 kHz).

The only difference in the principal setup of the SLG 80 and the SIM 80 is the type of interface (i.e., RS 422 for the SLG 80 and RS 232 for the SIM 80). Otherwise the devices are identical.

Figure 1 shows the setup. The devices are powered with a nominal input voltage of 24 V via a switching power pack. +15 V and -15 V are generated from this for the operation of the HITAG® long-range reader module HAT RM800.

This module is obtained from the Philips Semiconductors Graz GmbH company. It is the core of the device and contains all necessary functions (e.g., generation of the 125 kHz sending signal, modulation, demodulation, signal conditioning and signal evaluation).

The output signals of the reader module are brought to the appropriate level by the interface converter which is located on the power pack module. This module also contains the protective circuiting for the interface, voltage supply and inputs/outputs.

All components are installed in a metal housing with heat dissipater to draw off the heat created by the power loss of the linear end stage and to shield the components.

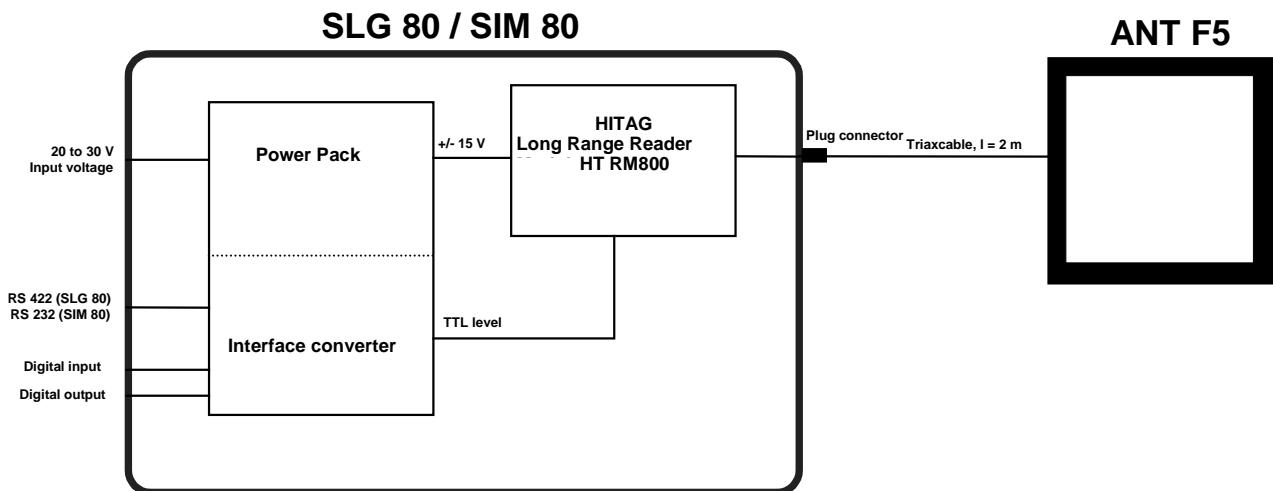


Figure 1

2. Data Memories

Since the data memory is a purely passive component (i.e., without power supply), it is powered by the 125 kHz field. Data transmission from the data memory to the read-write device is performed by load modulation of the field. Writing the data to the data memory is performed by switching the HF field on/off through the read-write device.

The data memory itself (figure 2) consists of an ASIC (logic) and a coil (antenna).

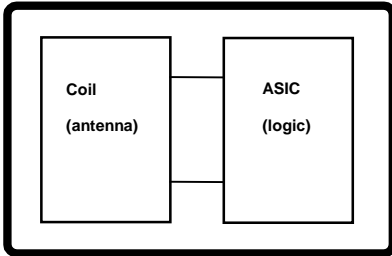


Figure 2

MOBY F read-write devices can work with different types of data carriers (e.g., HITAG® 1 and HITAG® 2 from Philips or data carriers from EM Microelectronic-Marin SA) which all use the same basic technology.

3. Application Areas of MOBY F

The MOBY F identification system was developed for industrial applications. Typical application areas include production control technology and logistics.