FP100HH reader description

The electronic seal's reader is a handheld device that enables to set and activate TDMA electronic seal when the container is loaded and closed.

The handheld reader (HHR) is based on Telematics Wireless's TDMA reader, which is controlled by a PDA. The TDMA reader is in standby mode most of the time and becomes active to very short duration upon application (PDA) software request. The application software can read a seal status, set and activate the seal. The application software can save the seal status to a file. The file can be downloaded to PC using the PDA synchronization software.

The HHR serial connector is used for software update of the IPAQ contained in HHR. It means that the device serial interface is the original interface of the IPAQ.

The transmitter in the HHR must NOT work while IPAQ serial cable is connected. The IPAQ and reader transmitter cannot work together while the serial cable is connected.

The transmitter is equipped with 2 dBi integral printed antenna.

The following voltages/current are applied to Q12 during "off" and "on" periods of the ASK modulation:

   a) when Tx data=0: V_c=0V, V_b=0.3V, V_e=0V, I_c=0mA, Q12 is closed;
   b) when Tx data=1: V_c =3V, V_b=1.6V, V_e=0.8V, I_c=44mA, Q12 is open.

Frequency is determined and stabilized by a SAW resonator. A SAW filter at the transmitter output provides suppression of spurious out of band signals. An RC network at the base of Q12 is used as a spectrum shaper. The modulation is ASK with an on to off ratio of at least 20 dB. The voltages applied to Q12 define the 1 dB compression point of the modulator and limit the output power.

The unit does not have calibration means of output power.