Manual
MiniReader® – Mobile Readout Equipment for MiniBus (M-Bus Inductive)

Function

The MiniReader is a handy battery powered device, for the reading of consumption meters using an inductive interface. It can read up to 16 meters which are displayed on the LC-Display.
Note: Before first operation please insert the battery.

Power On/Off and Start Display

By pressing one of the buttons the device powers up and immediately displays the meter counter display.
The MiniReader automatically switches of if no button is pressed within 1 minute.

Meter Reading

Place the MiniReader on the interface and then press the **Read** button. A short tone is heard and „Reading“ is displayed confirming the reading process. Depending on the type and amount of meters attached, the reading process can take up to 20 seconds. Under normal conditions the reading time should take 2-5 seconds.
After a **successful reading** a longer- higher pitched tone is heard and the data last read is displayed. After an unsuccessful attempt at reading a meter two short lower tones are heard and „Error no Read“ is displayed. Through the ▲ or ▼ key it is possible to leave this message, this will return you to meter position No.1.
By pressing the **READ** key a new reading process is attempted.

Meter Totalizer Display

The MiniReader can store 16 meter readings. To differentiate and organise these readings, in the top display line the Meter-Number and Data Set Number appear alternately. Displaying an 8 decimal place meter no. „ID“ is dislplayed in the right hand corner of the screen and the data set number is displayed with „Nr“. In the lower display line the meter totalizer is displayed by 8 decimal places. Through indicator points, the unit is shown MWh, GJ or m³. These units are printed just below the screen. The indicator point then flashes above the unit. The flashing of this point distinguishes it from the decimal point.

Paging and Data sets

The numbering of data sets is done as follows: the last read data set obtains the number 1. The previous data set which had the number 1 is now replaced with number 2 and so on. The last read data set is always displayed. With the ▼ key the next oldest data set is displayed and through the ▼ key the next newest. At the end of the data set list, one of the two arrows ▲ ▼become disfunctional. Which one of the keys can be used is displayed in the right hand side of the screen. The pressing of an arrow key (which is displayed) is confirmed with a short high pitched tone.

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Special Function: Erasing of Data Sets

To delete a data set press and hod the ▲ key for approximately 2 seconds until a short signal tone is heard. In the display a field „CLR“ will appear. To delete the data set one must press and hold the ▲ button and confirm by pressing the left button

▼ simultaneously. After successfuly deleting the value two short high pitched tones can be heard. If no more data sets are available to be deleted then the meter counter will display a „C“.

Special Function: Changing the Baud Rate

After powering up the device the default transfer speed is always set at 2400/300 Baud. To alter the Baud rate both the ▼ and the ▲ buttons must be pressed simultaneously. The actual Baud rate and the device number are displayed. With the ▲ key and the ▼ key the speed can be altered to 2400 or 300 Baud rate. With the **Read** key one can leave this menu and will be returned to data set No.1. It is advisable that a Baud rate of 2400/300 is used for usual applications. With this setting the device first tries to read at a speed of 2400 and if this is not possible it will automatically read at 300 Baud.

LoBat-Warning

If the battery power drops below a certain voltage then „LoBat“ will appear in the display. If the battery power returns to acceptable power levels the „LoBat“ will disappear from the display. By very low battery power the display gets ever increasingly weaker until the processor finally switches off. A special warning signal is not heard before the processor turns off. Therefore data is saved on the EEPROM before being rechecked and marked as valid. Invalid data being saved invalidly because of low battery power is therefore prevented. The battery (9V-Block 6LR61) can then be replaced !

Error Messages

With the error message „Error no Read“ which is displayed when the reading process is unsuccessful there is also another error message „Error“ followed by a two digit error number. This error message appears when an error occurs by reading or writing to the EEPROM.

Issue 12/2010