

Technical Brief

TouchReader+

TouchReader+ Operating Instructions

INTRODUCTION

The following information contains operating instructions for the operation of the Sensus Model 3096+ TouchReader+ as a meter reading device. If instructions are required for activation/deactivation of Sensus radios, please refer to the installation instructions for the specific radio.

The operating instructions cover the operation of the TouchReader+ for meter reading in conjunction with the Sensus TouchRead® System. If additional assistance is needed, please contact Sensus at 1-800-METER-IT (1-800-638-3748).

SYSTEM OVERVIEW

The Sensus TouchReader+ permits access to meter readings via the Sensus TouchRead System without the need to physically access the meter itself. The TouchReader+'s features include:

- Pocket size, easy to handle unit
- Ability to store up to sixteen (16) meter readings
- Simultaneously displays meter reading and ID
- Long battery life using 9-volt alkaline cell
- User friendly controls and operation

OPERATING INSTRUCTIONS

Refer to the TouchReader+ in Figure 1:



Figure 1

There are three control buttons on the TouchReader+. One marked "READ", one "Up Arrow" (▲), and one "Down Arrow" (▼). The pressing of any button is confirmed with tactile feedback and a short audible beep tone.

The function of the three control buttons will be explained in the following instructions.

The display layout is shown in **Figure 2**.

The display consists of two lines with 8 digits in each line including decimal points on the second line. The display also includes additional indicators: "ID" for encoder identification number; "LO BAT" indicating a low battery level of the TouchReader+ battery; "READ" for the encoder meter reading; "CLR" for clear function; up "▲" and down "▼" arrow icons indicating scroll direction of the display.

METER READING

• Single Meter Reading

To read an individual TouchRead meter, place the sensor of the TouchReader+ against a TouchPad remote or TR/PL (pitlid) sensor and press the "READ" button. During the reading process, the meter reader must keep the sensors correctly aligned.

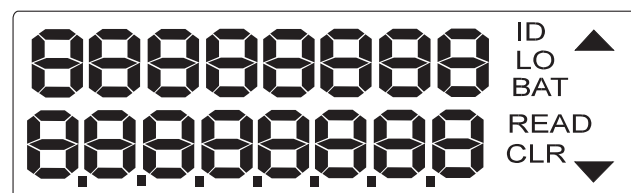


Figure 2

When properly aligned, the unit will display the absolute encoder ID on the top line as marked by the "ID" icon and the meter reading (four or six-digit) on the second line identified by the "READ" icon. The TouchReader+ will also emit a single, high pitch tone indicating the reading is completed.

The latest reading is displayed on the LCD. Any previous readings stored in memory can be accessed by using the scroll arrows. If there are additional readings in memory, the down "▼" arrow is displayed.

To view the additional readings, simply press the down "▼" arrow button. When additional readings are displayed in memory, the display will now show an up "▲" arrow icon indicating the latest readings and a number in the bottom left position of the display that indicates the memory location being read. There are eight locations in memory.

When memory location eight is being displayed, the down "▼" arrow icon is extinguished indicating the last memory position has been reached while the up "▲" arrow remains available to scroll back to memory position one.

Memory positions that contain no reading data are identified by the letter "C". The display will indicate the memory location and also display the "ID", "READ", "▲", and "▼" icons.

When all memory locations are used as new readings are taken the oldest memory location is overwritten. The last sixteen (16) meter readings will be accessible.

• MultiRead Meter Readings

To read TouchRead meters connected to a MultiRead module, place the sensor of the TouchReader+ against a TouchPad/pitlid sensor and press the "READ" button. During the reading process, the meter reader must keep the sensors correctly aligned.

When properly aligned, the unit will display numbers at the bottom of the screen for a couple of seconds while the MultiRead module is being read. The TouchReader+ will then display the absolute encoder ID on the top line as marked by the "ID" icon and the meter reading (four or six digit) on the second line identified by the "READ" icon. The TouchReader+ will also emit a single, high pitch tone indicating the reading has been completed.

When reading a MultiRead module, the reading corresponding to the highest channel (Channel "D" for MR-4 models, and Channel "H" for MR-8 models) is displayed in the first memory location. The other MultiRead readings can be obtained by scrolling with the down "▼" arrow through the memory locations.

To view the additional readings, simply press the down "▼" arrow button. When additional readings are displayed in memory the display will now show an up "▲" arrow icon indicating the latest readings and a number in the bottom left position of the display that indicates the memory location being read. There are sixteen (16) locations in memory. When memory location sixteen (16) is being displayed, the down "▼" arrow icon is extinguished indicating the last memory position has been reached while the up "▲" arrow icon remains available to scroll back to memory position one.

Memory positions that contain no reading data are identified by the letter "C". The display will indicate the memory location and also display the "ID", "READ", "▲", and "▼" icons. Unused MultiRead channels will also display the "C" provided the green and black wires of the MultiRead channel are connected indicating the unused channel.

CLEAR MEMORY LOCATIONS

Memory locations can be cleared by using the following procedure with the unit powered up:

- Press and hold all three buttons (Up, Down and Read). This will clear the memory and reset the TouchReader+.

All memory positions have now been cleared and the "C" will be displayed indicating a clear memory location.

POWER DOWN

After approximately one minute of inactivity, the TouchReader+ will emit a single, high pitch tone and automatically power down.

Once the TouchReader+ powers down, it will remain off until the "READ" button is pressed.

BATTERY CHANGE

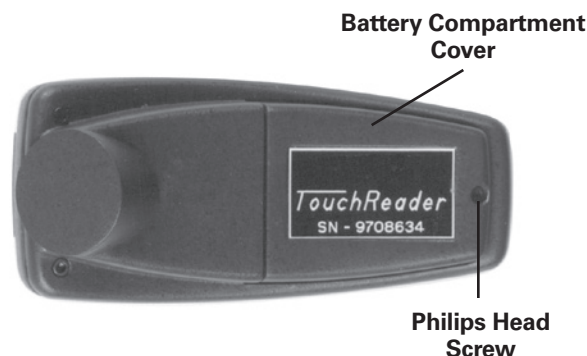


Figure 3

The battery of the TouchReader+ should be replaced when the "LO BAT" indicator on the display stays on continuously. Access to the battery is through the battery cover (Figure 3) secured by a single, Phillips head screw. Remove the screw and the battery cover door. Replace, using a 9-volt (PP3) alkaline battery. Replace the battery cover and Phillips head screw.

ERROR INDICATORS

The TouchReader+ has three reading error indicators. Error messages can be cleared when another operation is initiated. On pressing an arrow, the error message is cleared and the previous reading displayed. Error messages on the display include:

• ERROR - NO READ

TouchRead sensors failed to align or the TouchPad/pitlid sensor may have a broken wire connection. If an error occurs part way through a MultiRead reading, channels already read will be stored in memory and further reading abandoned.

• ERROR - ECRTYPE

Indicates unrecognized message format.

In the event of either of the above errors occurring, two short, low tones will be emitted.

• ER

Indicates an error when reading a MultiRead channel. This message will remain in memory until it is overwritten.

FCC AND CANADIAN NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio /TV technician for help

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.