

Intech Data Loggers

Mk4 HR Series Battery Replacement

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The Mk4 version of the HR series of loggers has a user replaceable battery. No soldering or sealant is required. Earlier versions of the HR logger had a factory or technician replaceable battery. This required soldering and using sealant.



How do I know if my HR logger is a Mk4 version?

- Battery voltage is 7.2 volts (not 3.6 volts).
- There is a small "4" in a triangle shape on the loggers label.
- The battery enclosure at the back of the logger is 77mm long (not 55mm).

The replacement battery kit for the HR Mk4 logger includes:

- Replacement battery.
- Replacement label.
- Instruction sheet.

Extra Parts for HR Mk4 logger

- If needed (any coloured wires), the **Stainless steel Mk4 tube** (battery enclosure).
- 2 16x1mm O rings (*battery enclosure*).
- 1 014EPR O ring (*communications socket*).

Instructions for changing a HR series MK4 Battery

- Remove the label.
- Gently unscrew the battery pack from the logger. Only one and a half turns are required (see fig 1).
- Look at the wires inside the logger. If they are all grey you do not need to replace the stainless steel battery enclosure. **If they are red, black, orange and yellow the battery enclosure will need to be replaced with the Stainless Mk4 tube (battery enclosure)** (see fig 2).

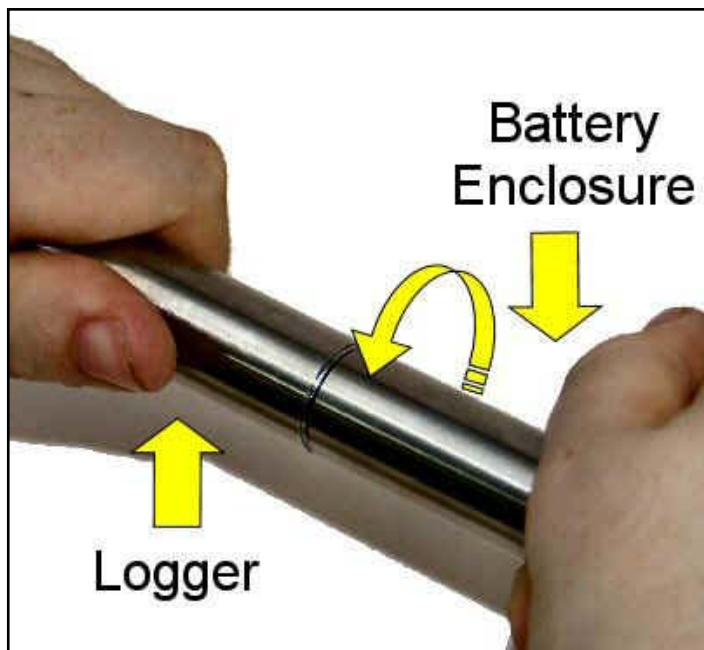


Fig 1: Unscrew battery enclosure Anti-clockwise.



Fig 2: Identify the Battery and Communications wires.

Note: **If any of the wires are red, black, orange and yellow the battery enclosure will need to be replaced with the Stainless Mk4 tube (battery enclosure).**

- Disconnect the 2pin white plug connected to the battery wires from the logger printed circuit board. Squeeze and withdraw (see fig 3).
- Withdraw the battery from the battery enclosure (see fig 4).

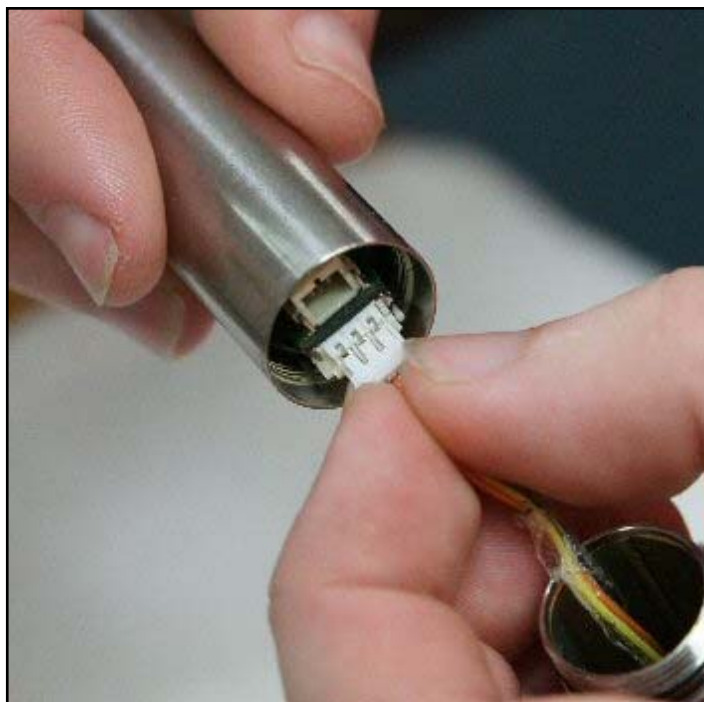


Fig 3: Unplug the connections.



Fig 4: Withdraw the old battery.

- If you need to replace the battery enclosure, disconnect the 3pin white plug connected to the battery enclosure and connect the new battery enclosure (with grey wires).
- Note that both the 2pin and 3pin connectors have a small keyway on one side so that they can only be connected the correct way around (see fig 5 and 6).



Fig 5: Plug in connections observing the 'key' on the plug.

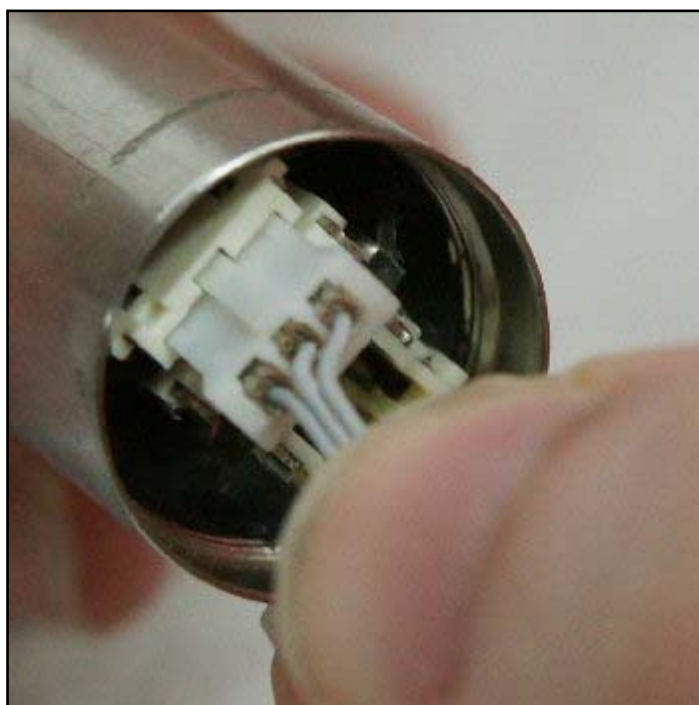


Fig 6: Connect both of the plugs.

- Check that the two O rings on the battery enclosure thread for damage and replace if necessary.
- Slide the new battery into the battery enclosure being very careful not to damage or squash the thin grey communications wires.
- Connect the plug from the new battery to the logger printed circuit board. It will only connect the correct way around.
- Rotate the battery enclosure in an anti-clockwise (counter clockwise) direction to pre-twist the wires before screwing on (see fig 7).
- Ensure that no wires are going to be captured or damaged by screwing on the battery enclosure.
- Bring the thread of the battery enclosure into contact with the thread of the logger.
- Make sure the battery enclosure and the logger body are exactly aligned.
- With small positive pressure, screw the battery enclosure into the logger body (see fig 8).
- If the battery enclosure rotates more than one revolution without the threads engaging, stop and



Fig 7: Pre-twist the wires Anti-clockwise.



Fig 8: Screw together.

- Check that the O ring on the communication socket for damage, and replace if necessary (see fig 9).
- Connect the logger to a computer and check the battery voltage on the real-time screen.
- If everything is OK, replace the label with the new label provided (see fig 10).



Fig 9: Check Communications Socket O-ring and replace if damaged.



Fig 10: Replace label.

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