

# IMPORTANT NOTE

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Dear customer,

Important information re. the future-l-xl-xxl; date of issue: 15 DEC 2011

We wish to take this opportunity to point out expressly once more that these speed controllers / governors can only operate safely if the length of the power cables is limited. This refers in particular to the cables between the **future** speed controller / governor and your batteries.

**You must not exceed the cable lengths stated on the Internet ([www.schulze-elektronik-gmbh.de](http://www.schulze-elektronik-gmbh.de)) and in the operating instructions (Chapter 6.3.1) under any circumstances - not even by a few centimetres.**

This is the procedure for measuring power cable length:

Start at the **future** with the black cable (or one of the black cables).

- a) Measure the length of the power cable between the **future** circuit board and the point at which the black wire enters BATTERY PACK #1.
- b) Measure or estimate the length of the wiring and cell links INSIDE BATTERY PACK #1.  
In particular, high-current batteries with an ODD NUMBER of cells are generally fitted with a power cable running from the end of the pack forward to the cable exit point.
- c) (Pack 2) If a second pack is wired in series (otherwise continue at g) )  
Measure the length of the power cable from the exit point of the red wire attached to Pack # 1 to the point at which the black wire enters Pack #2; this length must be measured in the connected state, INCLUDING any link cables (Y-leads) in use.
- d) (Pack 2) Measure the length of the wiring and cell links INSIDE PACK #2.
- e) (Pack 3) If a third pack is wired in series (otherwise continue at g) )  
Measure the length of the power cable from the exit point of the red wire attached to Pack #2 to the point at which the black wire enters Pack #3; this length must be measured in the connected state INCLUDING any link cables (Y-leads) in use.
- f) (Pack 3) Measure the length of the cables and cell links INSIDE PACK #3.
- g) Measure the length between the exit point of the red cable attached to the battery pack and the **future** circuit board.

Add up all the measured cable lengths and divide the result by 2 to find the length of the pair of cables actually present.

This value must not be greater than that stated in the operating instructions.

#### Example with two battery packs:

a) = 18 cm (7"), b) = 5 cm (2"), c) = 12 cm (5"), d) = 5 cm (2"), g) = 18 cm (7"). Total: 58 cm (23")

The total cable length refers to one pair of cables: 58 cm (23") divided by 2 => 29 cm (11.5").

A cable length of 29 cm (11.5") is only permissible for the **future-l** and **future-xxl**.

If you operate a **future-xl** with this length of cable, you automatically invalidate the guarantee, i.e. any claim under guarantee will be declined. You must either shorten the overall cable length, or install supplementary capacitors directly adjacent to the **future**.

#### Important notes:

It is also important to ensure that your connectors are always clean, and that the spring tension in the contacts is high.

- 1) There are multi-contact connectors on the market with too narrow a slot in the spring contact cradle. When the plug is pushed into the socket, the ring of contacts is compressed to the point where the slot is closed. If this happens, it is not possible to exert any more force on the contact pin located inside the spring cradle. The joined connectors form a sliding „ballrace“ which inevitably produces intermittent contact.
- 2) A common problem with connectors featuring slotted contacts (5.5 mm, 6 mm ...) is that the contact segments bend inwards when connected and separated frequently. This reduces or even nullifies the spring force and holding force, which again results in intermittent contact. For this reason we recommend that these connectors should only be used for motor cables.

#### Summary:

**Connectors which produce intermittent contact will ruin the future controller, and we will not entertain any claim under guarantee for such damage. We recommend the use of our two-bladed pp60-300 connector.**

- 3) You may occasionally find that an attempt to read out data stored on the **future** generates an immediate response of „no battery“ or „no data“. This means that the **future** is too warm: it should be left in a refrigerator for about fifteen minutes before data can be transferred successfully. The data remain stored in any case.

Yours sincerely - Schulze Elektronik GmbH

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