

 fut-xxl-e.htm; updated: 20 NOV 2009 

future-l, -xl, -xxl
**Speed controller for sensed and sensorless,
brushless electric three phases motors**

The future speed controller series are increased by -l, -xl and -xxl types.

These controllers are made with a totally new concept, with a new type of microprocessor and rugged FETs in the D²Pack case.

This type is especially made for the extreme applications in F3A-X models and/or industrial purposes.

Made in Germany!

The *future-l, -xl and -xxl* are configurable as the future-universal series via DIL-switches.

Other extraordinarily features "State Of The Art" are:

- Integrated blocking capacitors (these are space-saving placed inside the controller)
 - "Anti-Spark" circuit (avoids connecting spark)
- Integrated mounting holes (You should not mount controllers with this size and weight on its cables)
- Data logger function: a built-in flash memory stores more than one our up to 20 data sets per second
- Interfaces: Hall-sensor, 2 temperature sensors (e.g. for battery- and motor temperature), mini-USB (not on splash water protected types), 5V-SIO and
 - Built-in LiPoDiMATIC function: Single cell voltage supervision via a *Schulze BalCab20* connector.
 - Upgradable and configurable.

• Features xxl:

Big, one-sided cooling heat sink,
CAN bus optional,
the electronic parts are covered by a plastic housing.

Type	Current* [A]	Nickel cells	Lithium cells	Size about [mm]	Weight** about [g]	Cable [mm ²]	Throttle*** [mOhm]	Brake*** [mOhm]	Switching freq., Timing both	Usage
fut-l- 24.150WK	150/200	10-24	3-8	95+BR*65*21	124-156	4 * 4.0	2 * 0.7	0.7 / 3	automatic	Boat, Car
fut-l- 32.115	115/150	10-32	3-10	95+B*65*21	113-145	4 * 4.0	2 * 1.0	1.0 / 3	automatic	Fly, Heli
fut-l- 32.115WK	115/150	10-32	3-10	95+BR*65*21	124-156	4 * 4.0	2 * 1.0	1.0 / 3	automatic	Boat, Car
fut-l- 40.100	100/133	10-40	3-14	95+B*65*21	113-133	2 * 6.0	2 * 1.5	1.5 / 3	automatic	Fly, Heli
fut-l- 40.100WK	100/133	10-40	3-14	95+BR*65*21	124-144	2 * 6.0	2 * 1.5	1.5 / 3	automatic	Boat, Car
fut-xl- 32.200WK	200/260	10-32	3-10	130+R*73*21	189-229	4 * 6.0	2 * 0.56	0.56 / 3	automatic	Boat, Car
fut-xl- 40.160	160/210	10-40	3-14	130*73*21	167-199	4 * 4.0	2 * 0.9	0.9 / 3	automatic	Fly, Heli
fut-xl- 40.160WK	160/210	10-40	3-14	130+R*73*21	189-221	4 * 4.0	2 * 0.9	0.9 / 3	automatic	Boat, Car

fut-xxl-40.300	300/400	10-40	3-14	161+B*100*38	520-560	4 * 6.0	2 * 0.75	0.75 / 3	automatic	Fly, Heli
fut-xxl-40.300WK	300/400	10-40	3-14	161+BR*100*34	590-630	4 * 6.0	2 * 0.75	0.75 / 3	automatic	Boat, Car

Legend:

+B = 12mm pp60 motor socket, **+R** = about 2*19 mm cooling tube,

* = Duration current at full throttle for about 5 Ah consumption / Short time current for about 15 seconds,

** = Weight with/without power leads,

*** = Typical FET resistance in common.

future-xxl

Copyright © 1996-2009 Schulze Elektronik GmbH. All trademarks shown are trademarks of their respective owners. All rights reserved.
<http://www.schulze-elektronik.com>, designed by matthias schulze