

“MasterBus is not a product, it is the start of a new era”



A new era is starting for the Dutch company Mastervolt with the introduction of a simple cable. With the mission of providing integrated autonomous electrical power system solutions they are set to revolutionize the market with the roll out of MasterBus, their new approach to integrated power system solutions through a network. Marc Persoon, Product Manager of the System Components of Mastervolt, is very excited about the introduction of MasterBus. A graduate in Information Technologies and with a broad experience in the business, Marc is also an enthusiastic sailor himself, making him the ideal person to discuss all the ins and outs of MasterBus.

What exactly is MasterBus?

MasterBus is not a product, it is a communication platform between Mastervolt products. Designed for the next generation in system integration. MasterBus enables communication between the various on-board Mastervolt products and the outside world. It will help us to make the Mastervolt system of the future the easiest to install, easiest to operate and also make it the most advanced. Currently our Mastervolt products talk “product specific languages” known as protocols and our goal with MasterBus is to have a uniform protocol between Mastervolt products. MasterBus outperforms all the existing platforms, both in speed, reliability, flexibility and scalability; therefore it can replace all the current protocols.

What was the starting point for MasterBus?

We wanted to achieve three goals: simplify the operation; increase the flexibility; reduce installation effort. To realize these goals we needed enhancements in computer power and communication bandwidth between products. This is where we started to

design the parameters of the MasterBus communication platform. The platform opens up a lot of options and allows central easy-to-use panels to be plugged into the systems. During this development we added complexity in the background of product operation, but reduced complexity for the installer and the end user.



MasterView Easy, touch screen display

How does MasterBus work?

Using a daisy chain connection all MasterBus enabled products can be connected together. When the connection is established the products can and will talk to each other if needed. By having the possibility to speak to each other the total system performance can be improved. If for any reason there is no communication - or the MasterBus line is disturbed - the products act like normal self supporting products so redundancy is guaranteed.

What are the main benefits of MasterBus and for whom?

The benefits of MasterBus are numerous. For example the installer will notice that the cables between all on board Mastervolt products are standardized and he will have the freedom to connect all products without the danger of connecting different batteries together because MasterBus has fully galvanically isolated ports. The end user will be able to control the Mastervolt system centrally via an easy to use remote panel, or user-interface. We didn't forget to integrate a very important aspect of the user interface: Simplicity. Due to the standardized cables and remote panels, boat builders have the flexibility to offer upgrades of the electrical systems without major changes to the electrical concept, drawings and installation.

What do you mean “the start of a new era”?

We all remember the time that we made the shift from command operated computers (DOS) to the more visual operating systems (like Windows and

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MAC). In the DOS era only specialists could really operate a computer while the majority used the computer as an old fashion type writer using only a small part of the possibilities. With Windows and MAC now almost everybody can work with a computer, no matter what their age or experience. With MasterBus we expect a similar revolution in on-board control and operation of the ship. For example; the on-board electrical system is often



MasterShunt

divided into centralized AC and DC switchboards but how do you know where to look? With MasterBus you don't have to think about that anymore, there is only one user interface - all panels and switches are presented in the same way and so can be positioned logically..

Other suppliers also offer CANbus solutions. What makes MasterBus so special?

CANbus technology started to be developed about 25 years ago for the automotive industry to give highly reliable communication between different parts of an engine for example. This standard has proven to be very reliable, as a result it is no surprise that CANbus is now used in many industries. MasterBus is also based on a CANbus technology, but what makes MasterBus different is the proprietary protocol and galvanic isolation. The protocol as designed by Mastervolt is scalable from a small system where low energy consumption is important up to large systems with a high traffic density on the MasterBus. Galvanic isolation is necessary if multiple independent power sources are

connected together for communication and shared power supply. Displays and interfaces are powered via the MasterBus - the energy for these items is provided by products like battery chargers and battery sensors, acting as a power supply to the MasterBus. These power supplies are fully galvanically isolated DC/DC converters at ultra high efficiencies.

The end result of all this technical complexity is a simple to install system that functions in any configuration.

Is it going to be expensive?

No, MasterBus will be integrated in all relevant products without additional cost. For smaller systems the price stays more or less the same and in medium to bigger sized systems there will even be a cost reduction. Taking into account that



DC-Distribution

you can monitor any number of products with only one panel it might even save cost and you get all the benefits of MasterBus.

Do I have to get rid of my current equipment if I want to start with MasterBus?

No, you don't have to throw away your current products, we offer an interface between serial products that we use today. For example the Mass Combi can be connected to MasterBus by using a MasterBus Serial interface. The Mass Combi can now be controlled and monitored via MasterView panels, in fact the operation is actually simplified. The Serial interface comes with all the required cables in the box, simple plug and play installation. Other products like

the Mass Charger and the MAC/MAGIC range of DC/DC converters can be connected as well.



MasterBus-USB interface

Will MasterBus be able to communicate with equipment from other suppliers?

Yes, it will be possible. Non-Mastervolt products can be connected to the MasterBus via interfaces. The first interface will be the popular NMEA2000.

This interface allows interaction of MasterBus with a NMEA2000 network and vice versa.

What is your personal expectation from the introduction of MasterBus?

I am certain the market will react very positively, especially as we roll out our future developments. The excitement will increase with every product introduction as the benefits of MasterBus become stronger and stronger. Customers will recognize that we have designed a complete system with a level of integration that is really new to the world of power generation and power distribution.

During METS 2007 we introduce the first products which are MasterBus compatible. Over time many MasterBus products will follow, underlining MasterBus as the communication platform of the future.

MasterBus, the start of a new era...