



The BG 95 Profinet

‘Sweetie. If you want to become someone, you need to learn languages.’ What applies for children, applies also for electro motors. The more languages they speak, the more successful they are. Already now, Dunkermotoren is successful with motors which communicate to other gadgets or among themselves.

The languages that are spoken are not like Spanish, Russian or Bantu. Rather it concerns digital languages which get usually transferred via cable. These languages are called e.g. CANopen, Profibus or EtherCAT. Via these languages, the machinery controls communicate with the components. For example, electro motors receive commands for the speed they should run at or motors communicate with a control to inform of the actual temperature the motor end level is.

In the automation technology, there are currently several different digital languages available. Almost every control manufacturer has developed a language that suits to its requirements and gets accordingly pushed. Components as e.g. sensors or electro motors, need to speak the same language as the control of a machinery that they can get integrated in it. For example: A beer bottling plant manufacturer controls its machinery with the control from Beckhoff®. Consequently, several assembly lines, bottle grippers or valves need to be addressed with the EtherCAT language. Same situation with the control of Siemens® and the language Profinet.

As a manufacturer of drive solutions which are perfectly applicable for the automation technology, Dunkermotoren already offers interfaces to many common digital languages. The latest product of the linguistically talented motors is the BG 95 dPro PN. On the face of it its hardly distinguishing to the standard motor BG 95 dPro with CANopen interface. Only the communication plugs are D coded M 12 plus, instead of A coded.





But inside of the motor there's a complete communication module which speaks Profinet. It forwards commands from the external machinery control to the internal BG 95 dPro motor control. These commands are obeyed and information about the motor status gets transferred back to the machinery control in Profinet language. So, the communication module is also the interface from motor to the outside. All data from the motor are interchanged via this interface. So, in case of failure, the motor is also programmed, adjusted and analyzed.

At first glance, one could think the Profinet interface is simply another bus interface. But far from it. Physically it's an Ethernet interface, a very common computer interface. Many millions of computers are already networked with this interface. Due to the wide diffusion, the cost is low and the acceptance is high. For Profinet the Ethernet language was adjusted in speed to the high requirements in the industrial automation. Therefore, Profinet belongs among with the other languages of Powerlink and Ethernet IP as the Industrial Ethernet languages.

In the future, the interface can be used not only for Profinet but also for other Industrial Ethernet languages. It's also conceivable that the motor is directly linked to the internet. Via this way, it would be possible to analyze, install and update it with the latest firmware from all over the world. Already today, it is technically feasible but the associated safety risks need to be reduced to a minimum.

For the motor, this new communication interface is the gateway to the world. Therewith it is not only possible to communicate with the machinery controls or with other motors. But also, to exchange data with superior systems as e.g. a production control system or to save data directly in the cloud or in a data lake. From there data can be analyzed and help to select even better products. For this data exchange, motors revert to cross-system languages as OPC UA or MQTT.

With the new motor BG 95 dPro PN, Dunkermotoren speaks not only a new language, but it is also the base for a variety of new communication possibilities.





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