On the Right Track

Turck’s BL ident RFID system is ensuring the correct allocation of components in engine production

The engine is probably the most complex and technically demanding part of the entire automobile. If different variants of an engine are built on the same assembly line, this complexity increases further. Engine assembly lines are accordingly also detailed and complex. Engine production is a sequential process with defined stations. Once a component is fitted, it is not easy to reverse the operation – at least not without a justifiable amount of time and expense.

The consequence from this is that the countless number of components on each engine must fit perfectly and exactly in accordance with customer specifications. In order to ensure this and to exclude errors as much as possible, one automotive manufacturer in China is using RFID in its engine production for the mounting of moving parts. This ensures error-free and completely transparent production for the customer.

Multi-variant production

System integrators Tianyong Mechatronics, based in Shanghai, used Turck’s BL ident RFID solution to implement the quality assurance and control of engine production. The customer produces several engine variants on one assembly line. RFID read/write heads identify the current engine variant using an RFID tag that is fitted to the workpiece carrier of the engine blocks. The system reads the appropriate configuration of the necessary components from a database and links them with the current engine. Large engine components are provided directly with a tag while smaller components are brought into the line in special carriers.

Workers sort the smaller components in picking containers. The read/write heads on the assembly lines read the engine ID so that the controller can automati-
An automotive manufacturer in China is using RFID to coordinate the production of different engine versions. System integrator Tianyong Mechatronics chose Turck’s BL ident RFID system – because the modular system was easy to integrate in the existing Profibus DP and Modbus TCP network structure.

The modular structure enabled the same BL ident modules to be used on different gateways. We only had to replace the gateways to implement different protocols.

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