

Examining the Modular End of Line Control Unit Design Criteria for Vehicle Sliding Door System Slide Profile

Authors : Orhan Kurtuluş, Cüneyt Yavuz

Abstract : The end of the line controls of the finished products in the automotive industry is important. The control that has been conducted with the manual methods for the sliding doors tracks is not sufficient and faulty products cannot be identified. As a result, the customer has the faulty products. In the scope of this study, the design criteria of the PLC integrated modular end of line control unit has been examined, designed and manufactured to make the control of the 10 different track profile to 2 different vehicles with an objective to minimize the salvage costs by obtaining more sensitive, certain and accurate measurement results. In the study that started with literature and patent review, the design inputs have been specified, the technical concept has been developed, computer supported mechanic design, control system and automation design, design review and design improvement have been made. Laser analog sensors at high sensitivity, probes and modular blocks have been used in the unit. The measurement has been conducted in the system and it is observed that measurement results are more sensitive than the previous methods.

Keywords : control unit design, end of line, modular design, sliding door system

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