

Application Note

Industry: Automotive

Application: Pick and Place onto Index Table with Multiple I/O Inputs

Challenges:

Failure due to wear on wiring harnesses to I/O and motion controller on index table

Situation

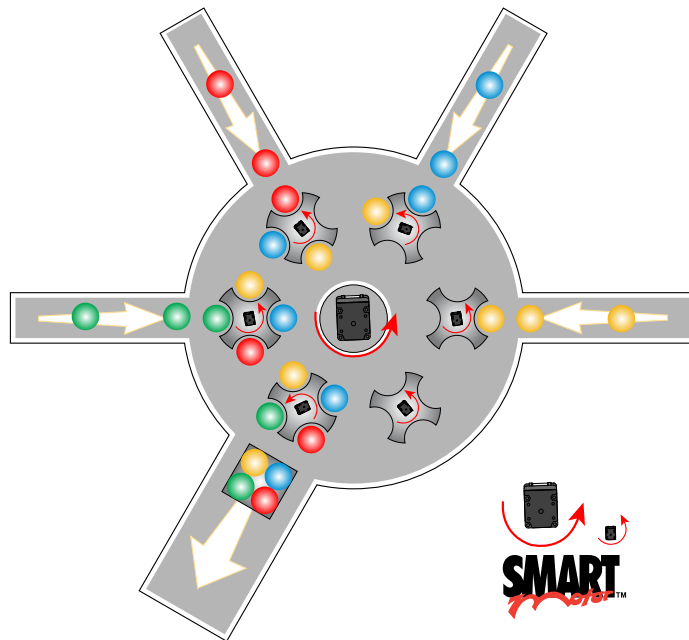
An OEM was selected as the exclusive supplier of critical components to an international automotive manufacturer with strict delivery deadlines. Breakdowns during component assembly meant costly overtime in order to meet delivery schedules.

Problem

Component assembly required taking pieces at 90 degrees off the assembly line onto an index table where several axes of motion inspect and reposition the parts. Coordination and synchronization were required between each axis of motion and with the several points of I/O on the index table, including sensors and thermocouples. Current failure rates due to wear and tear on wiring harnesses to I/O and motion controller on the index table were unacceptable given the new production schedules.

Solution

The OEM chose to replace conventional motion control system with SmartMotor to eliminate wiring to any control cabinet and reduce overall risk of wiring wear. The machine's tuning and performance parameters were saved and replicated to create a single programming environment for all axes with the single controller internal to the SmartMotor. All I/O and internal status information was accessible through defined variables for program monitoring and conditioning, with all I/O controlled directly through the SmartMotor. The OEM realized 30% in cost savings using a five-pole slip ring and the SmartMotor (only power and communications cables to the SmartMotor on the index table were required).



Full case study available at www.animatics.com/applications