



Case Study: Siemens PLC Upgrade

Location: RS Components, Nuneaton



Project Description: MCS Control Systems was contracted by RS Components to upgrade one of their Siemens PLCs in the One-Liner area from the S5 range to the current S7-300 range. The S5 PLC Rack included a serial interface card as the PLC interfaces with Warehouse Management System to alert FLT drivers that they are required to collect an order from the area. This functionality was to be replicated in the S7 PLC.

Approach: On our first visit to site, the existing S5 PLC code was uploaded. This was then converted as far as possible using the Siemens S5 to S7 conversion package.



As this is a critical area in the warehouse, this transplant had to be approached with a view to contingency. Our first step on site was to place the S7 PLC temporarily in the PLC cubicle and connect the I/O cabling in parallel with the existing S5 PLC cabling. On the initial swap over, communications proved to be unstable with the WCS. At this point we decided to revert to the S5 PLC and use some data logging software to capture and analyse the string of data on the RS232 bus. Using this data, we were able to replicate data block lengths and the data string using the S7 standard function blocks.

Various tests were carried out to prove the stability and robustness of the system.



Results: Working closely with the End User the new S7 PLC was tested and installed over a 3 weekend period with no down time or disruption to production.

