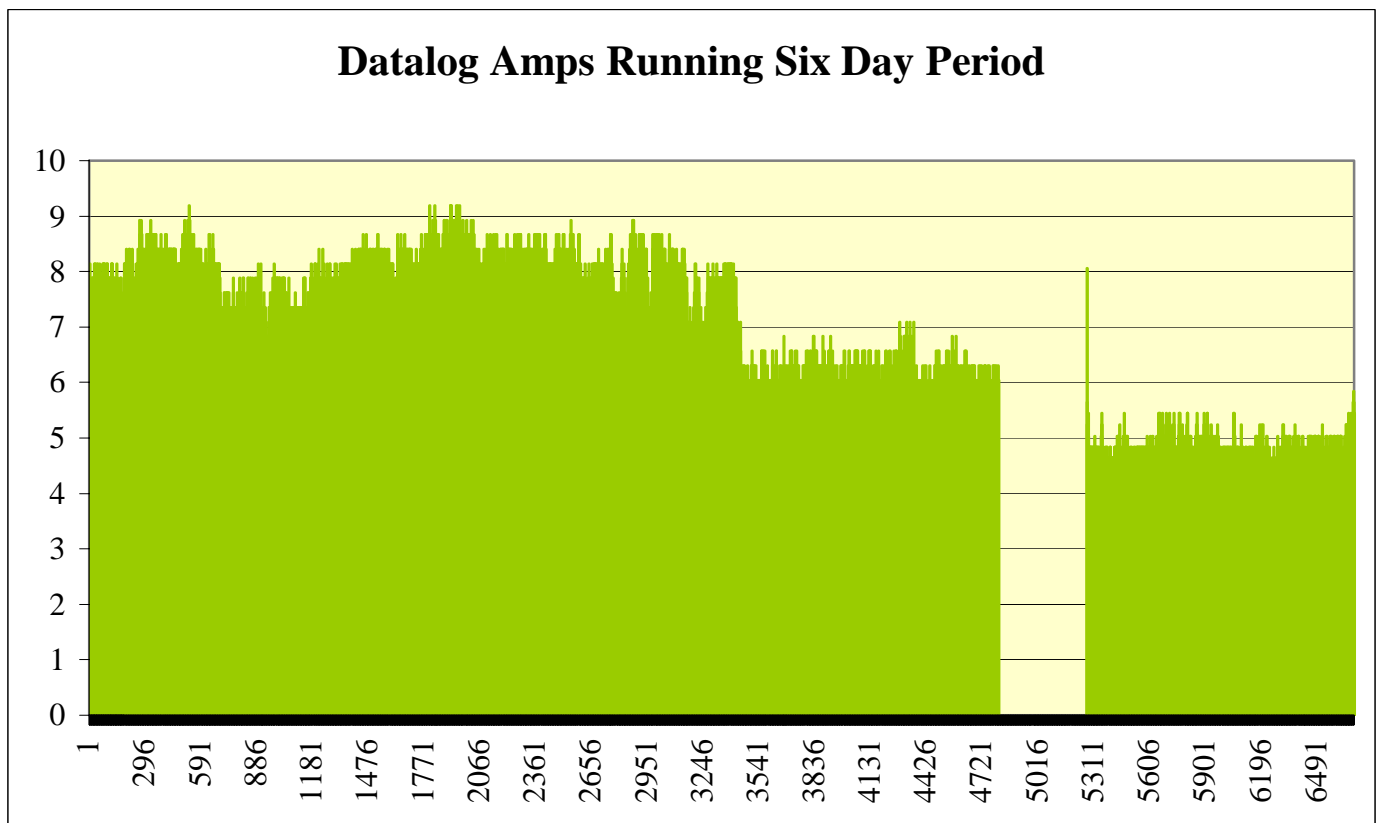


Evaluation of EnviroStart 240-SPMEC-10A on Sewing Machine at Protek Clothing

We have been asked to provide a data log of the operational activity of the sewing machine to which the EnviroStart MEC has been fitted at the Derby site of Protek Clothing Ltd.

The EnviroStart controller has been operating on a 6.5A FLC motor on an industrial sewing machine for some time but by the nature of its loading and both the age of the motor and its operation, the ability to show instantaneous savings using standard measurement processes is limited as the rapid change of load mask the underlying shifts of current and thus consumed kW. To overcome this problem we fitted a calibrated SPC Data Logger and took measurements over a period of six days, a period with the EnviroStart optimisation enabled and a period with it disabled. The results of the test are as shown in the chart below.



The break at data point 4760 is the Sunday when the machine shop was closed. The EnviroStart was switched into optimisation at data point 3387 and demonstrated a shift in mean current consumption of 8.2A to 6.3A. This gives a paid kW saving of >24% overall.

Payback Assumptions:

Based on the detail logged the mean savings are $\geq 24\%$. Based on given energy costs of £0.054p/kWh and a running time of 8hrs/day for 265 days/yr with the current price of an EnviroStart 240-SPMEC-10A of £99/unit the payback period calculated will be ≤ 1.91 years.