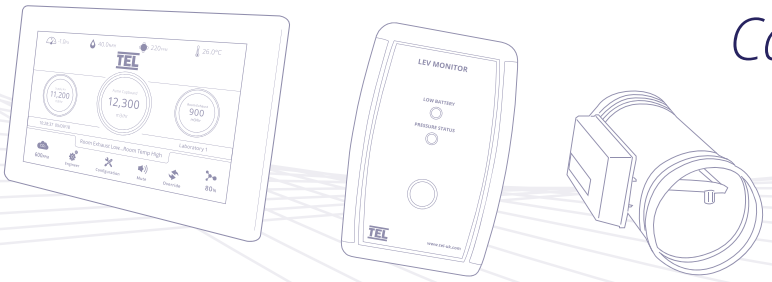

Case Study

Thermo Fisher Scientific

Overview and Challenge

Multi-national bio-pharma corporation, Thermo Fisher Scientific, aimed to reduce the operating costs of its laboratories in Pleasanton, California, while at the same time ensuring the safety of its users.

The fume cupboards of its four laboratories featured constant airflow volume (CAV) monitors, that continuously removed air and replaced with clean air, even when the cupboards weren't in use, so wasting energy.

Solution

The company appointed TEL to replace the CAV fume cupboard system with a variable airflow volume (VAV) solution, exchanging air only as required, therefore saving energy.

Fourteen TEL AFA1000 VAV controllers with associated dampers and actuators were installed, along with passive infrared (PIR) sensors to detect user proximity. The controllers were programmed to sound an alarm if hoods are left open for an extended period of time.

The VAV units were integrated with the existing building management system (BMS), enabling the efficient control of pressure and temperature. TEL utilised the BMS to implement an occupied/unoccupied schedule to reduce air flow when staff are not present.

All installation work that took place within the laboratories and which required the shutdown of HVAC equipment, was performed out of hours in order to preclude downtime.

Benefits

The TEL solution reduced annual energy consumption by 591,249kWh, saving Thermo Fisher over $128,000 (£100,000) and delivering a payback in under two years. The laboratories still meet or exceed all industry-accepted air-change rates, fume hood face velocities and contaminant/pressurisation envelope standards, and are a safe working environment for users.

Siemens project manager, Jason Clark said:

"We worked with TEL to deliver a comprehensive project with significant energy savings. The team did a great job collaborating across busy laboratories without interrupting production schedules."

World leaders *in airflow controls and monitors*

Temperature Electronics Ltd. Unit 2, Wren Nest Road, Glossop SK13 8HB UK
T. +44 (0) 1457 865 635 **F.** +44 (0) 1457 868 843 **E.** sales@tel-uk.com

www.tel-uk.com