Use case the SENSECOM-IMD series

Monitoring machine usage

Case

A machine factory in Finland (near Helsinki) offers, in addition to its main production, rentals of currently unused machinery of up to 150 machines (milling machines, lathes, presses, etc.). In the past, rentals have often led to overloading of machines, which has shortened their lifetime and increased maintenance and repair costs. Finding a relatively simple way of ensuring compliance with the terms of the lease was key to these leases.

How it was done in the past

When the workstation was handed back to the lessor after the rental, the maintenance technician checked the condition of the machine and tools, the possible extent of excessive wear or damage and recorded everything. The tenant was then invoiced for any extra costs associated with excessive wear and tear, but these were often disputed. The factory also attempted to increase the overall rental prices to compensate for the excessive wear and tear. However, this reduced interest in renting and disadvantaged honest tenants.

What it looks like today

For most machines, overloading will be reflected in the time course of power consumption for that machine. In this case, with the help of appropriate technology, the over-consumption can be monitored in short periods of time. A simple electricity meter has been added to each machine, together with a SENSECOM-IMD device that reads pulses representing energy consumption, processes them and sends the data. The device is able to report periodically on consumption peaks from short periods of time. It is thus clear whether and by how much the usage conditions of a given machine have been exceeded. The customer and the tenant are immediately informed if the machine is overloaded. In the event of repeated overloading, the tenant can be fined for a clear violation of the conditions, or further overloading can be prevented.

SENSECOM-IMD

Conclusion

With the monitoring of peak energy consumption of rental machines, the factory has gained a very effective tool to efficiently provide and manage rental machines, which today has an equivalent economic benefit to them as their own core production.

Use of the equipment in other areas

The SENSECOM-IMD meter reading device is mainly deployed where electricity consumption needs to be monitored continuously. The S0 pulse interface is the most common interface of almost all electricity meters and many other consumption meters. SENSECOM-IMD is preferably deployed with billing meters because it already has a built-in galvanic isolation of the S0 input and there is no need to insert an additional signal separator, which makes the investment in readings more expensive.