Unauthorized machine operation and manipulation of critical parameters can be prohibited using RFID technology

Application:
Complex, expensive, and potentially dangerous machines must be operated only by trained and authorized personnel. An electronic log book is used to record operational machine parameters in conjunction with the operator's identity.

Goal:
In addition to the safe operation of the machine, it is important to prevent damage. This can be accomplished by keeping track of the machine's operating hours and parameter settings, the type of produced part, and the identity of the operator.

Requirements:
To ensure process safety, the automatic data tracking must be tamperproof, and the operation of the machine has to be simple. Furthermore, the “key” used to access the machine and enable data association must not be easily reproducible and must be easily blocked in case it is lost. Lastly, the operator must be identified.

Customer advantage:
RFID tags, replacing conventional access keys, are inexpensive to replace, difficult to copy, and tamperproof. Operator permission levels can be managed flexibly; the same key can even allow different operational levels at different machines depending on the individual operator. Additionally, time limits can be enforced.
What is being done:
RFID tags in the form of key fobs are especially useful for this application. When paired with the correct read head, these color-coded key fobs can be used for different access permission levels. Various operations can be differentiated to an even finer degree by discriminating between operators, maintenance personnel, and system administrators.

Usage authorization for a machine is managed via RFID.

Machine utilization and the type of operations can be evaluated. Usage authorizations can be changed as necessary.