CLAIMS

1. A computing device for controlling access to features of a device, the computing device comprising:

a valve assembly with a valve that opens and closes to regulate flow of fluid,

a processor disposed on the valve assembly and the processor configured to:

exchange signals with a control system, the signals including a process parameter that relates to a process on a process line, a control signal that instructs the processor to operate the valve assembly in response to the process parameter, and a request to access values within an access control register accessible to the processor and storing an access control parameter indicating whether a user has access to a feature of the valve assembly, the request comprising an authentication key used to set an access authentication parameter and a value used to set an access parameter;

evaluate the authentication key and the access authentication parameter utilizing an authentication algorithm to determine whether the request is authenticated; and

responsive to the authentication key and the access authentication parameter allowing the authentication algorithm to successfully authenticate the request,

access plural registers on the valve assembly that serve to separately maintain a read access register and a modify access register for operating parameters for the valve assembly, and a service access register for service parameters for the valve assembly: and

modify one of the read access control register, the modify access register, or the service access register based upon the value of the access parameter to change the feature of the valve assembly.

2. The computing device of claim 1, the feature corresponding to at least one of a service and a device parameter.

3. The computing device of claim 1, the access control register including a read access control register that includes a read access control parameter indicating whether the user has access to read a device parameter.

4. The computing device of claim 1, the access control register including a modify access control register that includes a modify access control parameter indicating whether the user has access to modify a device parameter.

5. The computing device of claim 1, the access control register including a service access control register that includes a service access control parameter indicating whether the user has access to invoke a service.

6. The computing device of claim 1, the processor being further configured to:

responsive to the authentication key and the access authentication parameter allowing the authentication algorithm to not successfully authenticate the request to modify a read access control parameter, provide a substitute value to the user.

7. The computing device of claim 6, the processor being further configured to:

provide a status with the substitute value that the substitute value is not correct.

8. The computing device of claim 1, the request including device identifying information, and the processor being further configured to:

evaluate the device identifying information utilizing the authentication algorithm to determine whether the request is authenticated.

9. The computing device of claim 8, the processor being further configured to:

responsive to the authentication key and the access authentication parameter allowing the authentication algorithm to successfully authenticate the request, modify the access control register for a device instance of the device based upon the device identifying information specifying the device instance.

10. The computing device of claim 8, the processor being further configured to:

responsive to the authentication key and the access authentication parameter allowing the authentication algorithm to successfully authenticate the request, modify the access control register for devices of a device manufacturer of the device based upon the device identifying information specifying the device manufacturer.

11. The computing device of claim 8, the processor being further configured to:

responsive to the authentication key and the access authentication parameter allowing the authentication algorithm to successfully authenticate the request, modify the access control register for devices of a device type of the device based upon the device identifying information specifying the device type.

12. The computing device of claim 8, the processor being further configured to:

responsive to the authentication key and the access authentication parameter allowing the authentication algorithm to successfully authenticate the request, modify the access control register for devices of a device purchase order including the device based upon the device identifying information specifying the device purchase order.

13. The computing device of claim 1, the processor being further configured to:

receive the request through a field bus interface.

14. The computing device of claim 1, the processor being further configured to:

receive the request through a local user interface of the device.