ABB Ability™ Verification for measurement devices — SRV500
Verification made easy
Key challenges faced by industrial operations
Downtime, product quality issues, and unnecessary service visits for measurement devices

Per the ARC Advisory Group:

- **5%** of annual production lost to downtime and poor product quality
- **80%** of those losses are avoidable
- **40%** of losses due to operator error

**ABB studies show that our field service visits are for:**

- Routine checks: 35%
- False positives: 28%
- Calibration shifts: 20%
- “Zero off” issues: 6%
- Plugged lines: 6%
- ABB measurement device failure: 4%

Eliminate the avoidable
Manual verification is slow and problematic
Meaning longer downtimes

**Done by hand** using manual tools, multimeter testers, etc.

**Requires** extensive trainings

**Requires** longer downtimes

**Risk of unplanned downtimes** if not done properly
Software verification is faster

But you need multiple software packages for multiple device types
Communication protocols limit functionality

Historically, one verification software did not work with all communication protocols

- NFC
- Digital HART
- Infrared
- HART modem

You would need to match the communication protocol to the type of measuring device and then match that to a verification software package.
# Difficult and outdated software technologies

Slows down or delays verification process

<table>
<thead>
<tr>
<th>Windows XP OS and lower</th>
<th>32 bit based</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems during installation</td>
<td>Outdated software design</td>
</tr>
</tbody>
</table>
Introducing ABB Ability™ Verification for measurement devices

One software package verifies multiple device types

April 2019:
- Magnetorestrictive Level (LMT)
- Coriolis Series

Q2 2019:
- Pressure 266
- Temperature TTX300
- Thermal Mass Flowmeters (TMF)

Q3 2019:
- Positioners EDP and TZIDC
- Continuous Water Analyzers (CWA1)
- Laser Level (LLT)

1 software for a variety of device types = simpler, faster verification
Compatible with all 4 communications protocols
Plug in the appropriate USB adapter

Using one software package on your tablet or notebook, you can communicate using the 4 most common protocols to verify multiple types of measurement devices.
Easy-to-install and use
Is also backwards compatible to 32-bit, Windows XP

- Easy to install: first download and install the SRV500 program and then your device-specific Verification Definition Files (VDFs)
- Is also backwards compatible with older 32-bit computers running Windows XP

Latest technologies = faster tests
Intuitive, simple user interface
Most tests involve just one click

Easy-to-use = faster tests
Straightforward functions

1. Click to verify your device
2. View Past Test Results
   - Look at past verification information and charts for specific devices
3. Utilities
   - Preconfigure
   - Manage VDF
   - Fingerprint
   - Import/Export Test Results
4. Administration
   - User Admin
   - License Management
5. Make a Fingerprint of the currently connected device
6. Export the test result database to any other machine or simply use it for backup
7. Create new users with different privileges
8. Activate additional features

Opens a menu for all past test results and verification reports
Download VDF files from ABB.com for free and add devices you want to verify
Verify devices to design parameters
Quickly, without production loss

Auto-verification extends your calibration cycle:
• Reduce costs by only calibrating when necessary*

Verification is now used to meet:
• ISO 9000 / 9001 QMS
• Industry regulations (e.g. WRAS, ACS, DVGW W270, NSF – 61, AZ/NZ 4020)
• Safety requirements

* Verification is NOT calibration and will NOT provide a certificate of conformance to ISO 17025.
Reduce costs, speed up verification
Manual vs. automated verification

<table>
<thead>
<tr>
<th>Cost reduction example</th>
<th></th>
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<tbody>
<tr>
<td>Annual revenue</td>
<td>$150,000,000</td>
</tr>
<tr>
<td>Personnel $/hour</td>
<td>$60</td>
</tr>
<tr>
<td>Production hours</td>
<td>24/7/345</td>
</tr>
<tr>
<td>Measurement devices</td>
<td>75</td>
</tr>
<tr>
<td>Annual verification $ for regulatory requirements</td>
<td>$150,000</td>
</tr>
<tr>
<td>Annual maintenance &amp; repair on devices</td>
<td>$100,000</td>
</tr>
<tr>
<td>Lost production due to poor quality</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summary &amp; results</th>
<th>Low estimate</th>
<th>High estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced maintenance</td>
<td>$162,000</td>
<td>$170,000</td>
</tr>
<tr>
<td>Improved quality production</td>
<td>$75,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Increased throughput (production)</td>
<td>$130,435</td>
<td></td>
</tr>
<tr>
<td>Risk reduction</td>
<td>$730,435</td>
<td></td>
</tr>
<tr>
<td><strong>Total potential annual reduction to costs</strong></td>
<td><strong>$1,097,870</strong></td>
<td><strong>$1,180,870</strong></td>
</tr>
</tbody>
</table>
The basic program is **no cost**

Try it before you buy it

1) Google “SRV500” and download the verification software to try before you buy it.

2) Download the Verification Definitions Files for each type of measurement device.

The complimentary version lets you run the verification for your measurement device, delivering either a PASS or FAIL result.

Quickly verifies your measurement devices.
Full-feature software does much more
Enables predictive maintenance via condition monitoring

1) **Verification reports**: print/import/export test results. Results can be uploaded to user’s servers.
2) **Chart past and current test results** to trend diagnostic data. In other words, perform predictive maintenance based on the actual condition of the device.

**Diagnosis data trending:**

Predictive maintenance maximizes your production availability
Fingerprint function

Fingerprint to Factory or on-site verification tests

1) **Fingerprint to Factory**: verify the device to its original factory verification test to ensure performance has not degraded or

2) **Fingerprint on Demand**: after device commissioning, create a new Fingerprint based on the actual conditions at your site

Compare the device’s actual performance to the most relevant benchmark for your production process
Cyber security for SRV500
Meets all of the following ABB requirements

Minimum cyber security requirements

Implementation
• Removal of backdoors
• Confirm quality of crypto and security functionality
• Hardening

Verification
• Security assessment
• Robustness testing
• Malware prevention

Processes
• Vulnerability handling
• Patch management
• Digital certificates
• Use of ABB Public Key Infrastructure

Documentation
• End-user documentation
• Deployment guidelines
ABB Ability™ Verification for measurement devices

Channel partner testimonials

From pump rental supplier:
“We have now been using the new software for months. It has cut down the time needed to test the magnetic flowmeter considerably. We now have no waiting time when testing. The layout of the new software is also great, with clear indications on ‘pass’ or ‘failed’ results. The ability to reference each unit at a later date will be very useful.”

Electrical Asset & Support Manager

From a flow measurement service provider:
“I would just like to say a big thank you for helping us with the software. The software is a treat. Not only has this software potentially stopped us from being kicked off a contract, it may well open future doors.”

Sales Manager
Prepay for verifications
1 credit = 1 verification

Simple prepayment program:
1) Buy credits in advance
2) Load them into local notebook or tablet
3) 1 credit = 1 verification
4) SRV500 shows credit balance for each computer
5) Quantity discounts apply:

<table>
<thead>
<tr>
<th>Credits</th>
<th>Quantity discount</th>
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<tbody>
<tr>
<td>10-49</td>
<td>n/a</td>
</tr>
<tr>
<td>50-99</td>
<td>~30%</td>
</tr>
<tr>
<td>100+</td>
<td>~40%</td>
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Credits | Quantity discount
--------|-------------------
10-49    | n/a
50-99    | ~30%
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### ABB Ability™ Verification for measurement devices

#### Summary of SRV500 benefits

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
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<tbody>
<tr>
<td>Universal</td>
<td>Tests multiple device types</td>
</tr>
<tr>
<td>One-click</td>
<td>Fully automated test</td>
</tr>
<tr>
<td>Fast</td>
<td>4x faster than manual tests</td>
</tr>
<tr>
<td>Compatible</td>
<td>Handles common device protocols</td>
</tr>
<tr>
<td>Intuitive</td>
<td>Minimized learning curve &amp; training investment</td>
</tr>
<tr>
<td>Secure</td>
<td>Less risk for cyber attacks &amp; related impacts</td>
</tr>
<tr>
<td>Fingerprint</td>
<td>Faster, more effective decisions</td>
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**Verification made easy**
Need to verify device inputs and outputs?
Get the ABB SRV500 Enhanced Tester (Release end of May)

Verify the inputs and outputs of your measurement device using the connector port on the tester.

Appropriate for:
• VortexMaster
• WaterMaster
• ProcessMaster
• AquaMaster and AquaMaster4
• Sensyflow FMT500ig
More information and contact

**SRV500 website**

http://new.abb.com/products/measurement-products/service/advanced-services/srv500

**E-learning**

https://mylearning.abb.com/?q=share/training/Nf1mKuv1GF

Just click **Sign in**