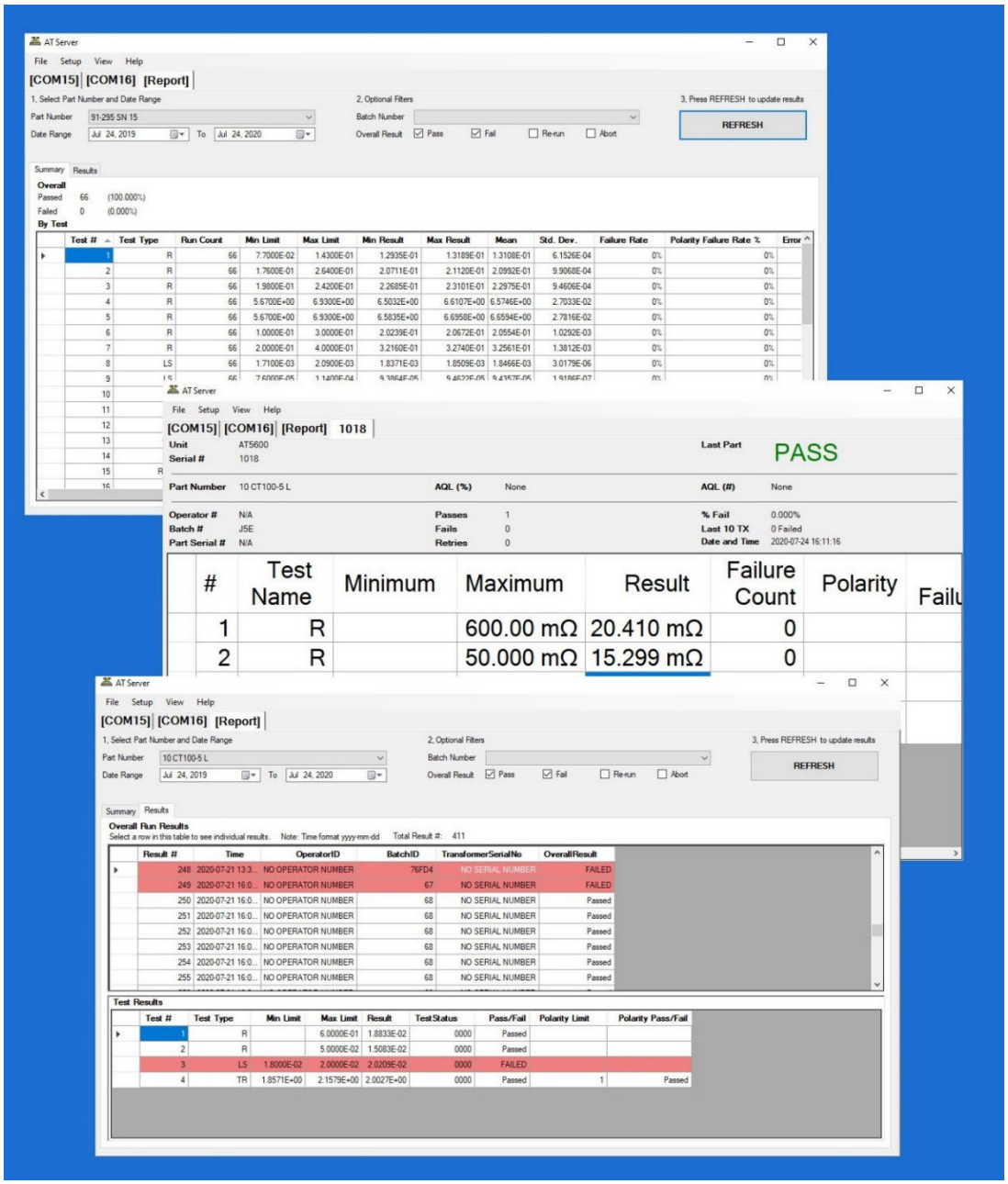
VOLTECH INSTRUMENTS

AT SERVER dotNET User Manual



AT SERVER dotNET

sales@voltech.com

www.voltech.com

© Voltech Instruments All rights reserved.

No part of this publication may be produced, stored in a retrieval system, or transmitted in any form, or by means, electronic, mechanical photocopying, recording or otherwise without prior written permission of Voltech.

98-122 Issue 5 – v4.1.8473

Table of Contents

1. Introduction 5

1.1. AT Server dotNET New Features 5
1.2. Database Connectivity 5
1.3. Results 6
1.4. Interface 6
1.5. Built-In LocalDB and Reports 7
1.6. History of AT Server Versions 8

2. AT Series Server Software 9

2.1. Introduction 9
2.2. Installing the Server Software 10
2.2.1. Computer Requirements 10
2.2.2. Installation Instructions 10
2.3. Starting for the first time 11
2.3.1. Running the software 11
2.3.2. Initial Configuration 11
2.4. Setting up the Options 12
2.4.1. COM Ports Tab (RS232 only) 12
2.4.2. Network Tab 14
2.4.3. Programs Tab 16
2.4.4. Results Tab 17
2.4.4.1. CSV Storage Enabled 18
2.4.4.2. TSV Storage Enabled 19
2.4.4.3. External Database Enabled 20
2.4.4.4. Local Database Enabled 22
2.5. Test Results 23
2.5.1. Receiving Test Results 23
2.5.2. Real-Time Monitoring 24
2.5.3. Saving results as CSV 26
2.5.4. Saving Results to an External Database 27
2.5.4.1. Introduction 27
2.5.4.2. Database Tables 28
2.5.4.3. Use of data in Database 31
2.6. LocalDB Database + Report Generator 32
2.6.1. LocalDB Location 32
2.6.2. LocalDB Reporting 33
2.6.2.1. Selecting and filtering data 33
2.6.2.2. Summary Tab 34
2.6.2.3. Results Tab 35
2.6.2.4. Overall Run Results 36
2.6.2.5. Test Results 37

3. Change Log 38

3.1. AT SERVER dotNET software 38
3.2. AT SERVER dotNET manual 40

1. Introduction

1.1. AT Server dotNET New Features

The AT SERVER dotNET is a complete rewrite of the AT SERVER program.

This has allowed us to take advantage of native MS libraries for communications, to speed up results saving and to better support the Ethernet functionality on the AT5600, as well as implement new and exciting features quickly as the AT5600 and AT Server develop in the coming months.

The latest version still supports the AT3600 and ATi as well as the AT5600.

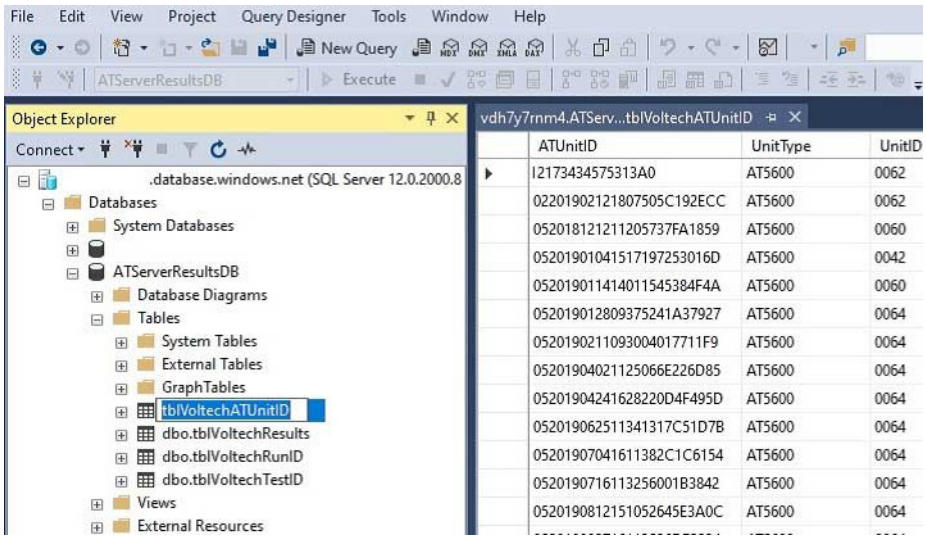
As before, multiple units, of different models, using RS232 or Ethernet, can be connected simultaneously to one AT SERVER.

Or if you prefer, several AT SERVER programs can be run on separate PCs, but still using the same central programs storage folder, central results storage folder and Database store.

What's New?

1.2. Database Connectivity

Connection to your own external MS SQL/ MS ACCESS database is now a free feature of the AT SERVER for all users, whereas as before it was a purchased option.

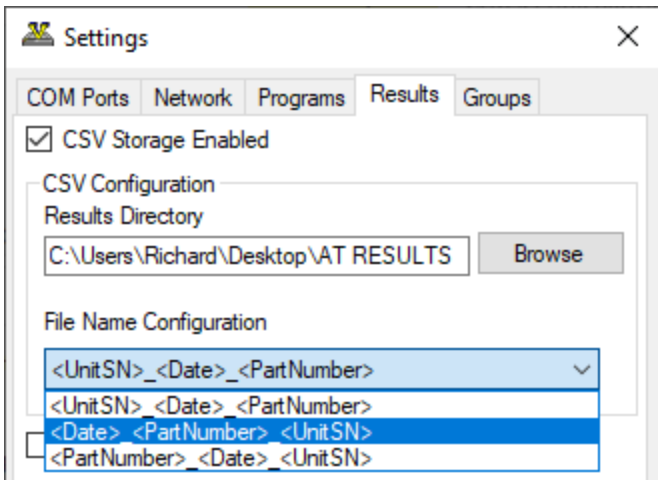


See 2.5.4 for more details.

1.3. Results

Enhanced results display, and batch statistics is now free for all users, whereas before it was a purchased option.

Customizable file names for CSV results, allowing for easier identification of results files.

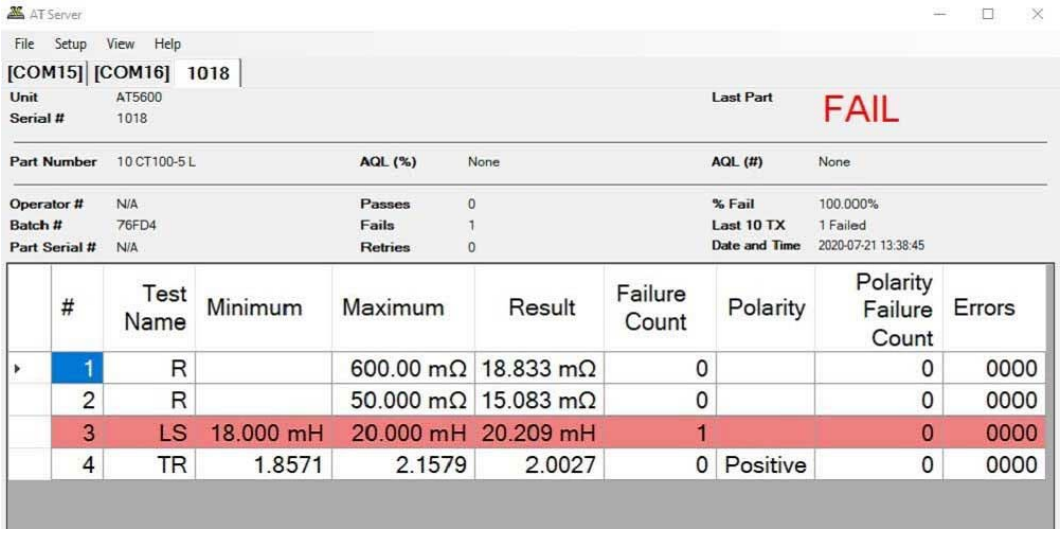


See 2.4.4.1 for more details.

1.4. Interface

Results columns and positions are now configurable to allow you flexibility in the results displayed.

Font size is changeable to make results easier to see on screen.



#	Test Name	Minimum	Maximum	Result	Failure Count	Polarity	Polarity Failure Count	Errors
1	R		600.00 mΩ	18.833 mΩ	0		0	0000
2	R		50.000 mΩ	15.083 mΩ	0		0	0000
3	LS	18.000 mH	20.000 mH	20.209 mH	1		0	0000
4	TR	1.8571	2.1579	2.0027	0	Positive	0	0000

See 2.5.2 for more details.

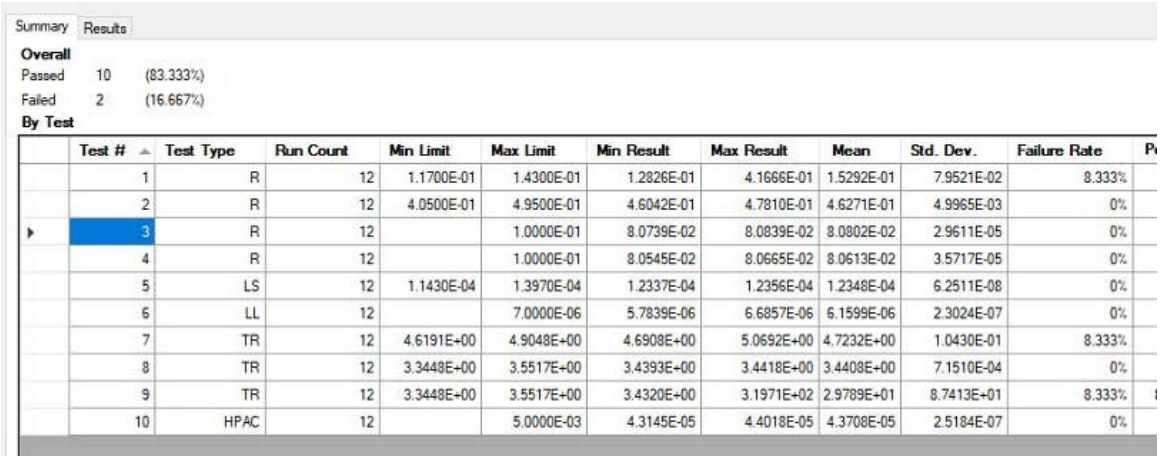
1.5. Built-In LocalDB and Reports

The AT SERVER now also comes free with a built in Microsoft LocalDB database.

This saves a copy of all results locally on the PC to a MS LocalDB database.

This then, allows users to use the free built-in reporting function to quickly analyze data, without any need for expertise in databases.

Also provides a silent back up, that will update your CSV results storage or MDB/SQL external database if a communications or network failure temporarily make these inaccessible to the PC.



Summary | Results

Overall

Passed 10 (83.333%)

Failed 2 (16.667%)

By Test

Test #	Test Type	Run Count	Min Limit	Max Limit	Min Result	Max Result	Mean	Std. Dev.	Failure Rate
1	R	12	1.1700E-01	1.4300E-01	1.2826E-01	4.1666E-01	1.5292E-01	7.9521E-02	8.333%
2	R	12	4.0500E-01	4.9500E-01	4.6042E-01	4.7810E-01	4.6271E-01	4.9965E-03	0%
3	R	12		1.0000E-01	8.0739E-02	8.0839E-02	8.0802E-02	2.9611E-05	0%
4	R	12		1.0000E-01	8.0545E-02	8.0665E-02	8.0613E-02	3.5717E-05	0%
5	LS	12	1.1430E-04	1.3970E-04	1.2337E-04	1.2356E-04	1.2348E-04	6.2511E-08	0%
6	LL	12		7.0000E-06	5.7839E-06	6.6857E-06	6.1599E-06	2.3024E-07	0%
7	TR	12	4.6191E+00	4.9048E+00	4.6908E+00	5.0692E+00	4.7232E+00	1.0430E-01	8.333%
8	TR	12	3.3448E+00	3.5517E+00	3.4393E+00	3.4418E+00	3.4408E+00	7.1510E-04	0%
9	TR	12	3.3448E+00	3.5517E+00	3.4320E+00	3.1971E+02	2.9789E+01	8.7413E+01	8.333%
10	HPAC	12		5.0000E-03	4.3145E-05	4.4018E-05	4.3708E-05	2.5184E-07	0%

See 2.6 for more details.

1.6. History of AT Server Versions

	AT Server Legacy Version	AT Server	AT Server dotNET
Version	V 3.26.05	V 3.40.04	V 4.00.00
PC O/S	WINDOWS XP, 2000, VISTA, 7,8,10. 32-bit and 64-bit	WINDOWS 7,8,10. 32-bit and 64-bit	WINDOWS 7,8,10. 32-bit and 64-bit
AT Testers Supported	AT3600 ATi	AT5600 AT3600 ATi	AT5600 AT3600 Ati
CSV results storage	YES (As *.ATR)	YES (As *.ATR)	YES (As *.CSV)
External database results storage	YES purchased option	YES purchased option	YES FREE
Built-in database with Built-in results reporting	NO	NO	YES FREE
OLE commands	YES	NO	NO

2. AT Series Server Software

Centralized data storage for the AT Series Transformer Testers

2.1. Introduction

This chapter will guide you through the operation of the AT Series Server application.

The server program supplied with your AT series tester may be considered as an on-line storage system.

The server will handle two types of data:

Test Programs – providing a central store for *.ATP programs that can then be sent to multiple AT units.

Test Results - Results can be gathered again to a single folder as separate ATR (CSV) files and/or to a single Database file.

Test programs that are created using the AT Editor application should be stored into the (user definable) server program file directory.

All testers connected to the server then have access to the same program file store.

Programs are requested by an AT tester, recalled from the server, and then sent to the AT tester for execution.

Test results are generated from every program execution, and (if the option is set in the program) then sent to the server for display and storage.

The data is then stored in a file or a database for record keeping and analysis.

The features of the server include:

MS Windows application style dialogues and tools

Storage of all previously created test programs

Transfer of test programs to the AT tester on request

Test results may be received and stored in a database ready format for easy offline analysis.

2.2. Installing the Server Software

All software and any free updates are available from the Voltech website www.voltech.com., specifically, on the downloads page www.voltech.com/Support/Downloads

2.2.1. Computer Requirements

Before attempting to install any Windows software, check that the PC satisfies the following hardware requirements:

Operating system:	Windows 7, 8 and 10.
	32 or 64 Bit.

2.2.2. Installation Instructions

Download and follow the instructions to install the AT Server software.

The installation program will suggest a folder in which to place the installation files:

This directory will be created if it does not already exist.

If you want to place the files elsewhere, browse to another directory.

If you have a previous version of the Server software already installed on your PC, the procedure outlined above may also be used to install an updated version.

None of your program files will be lost.

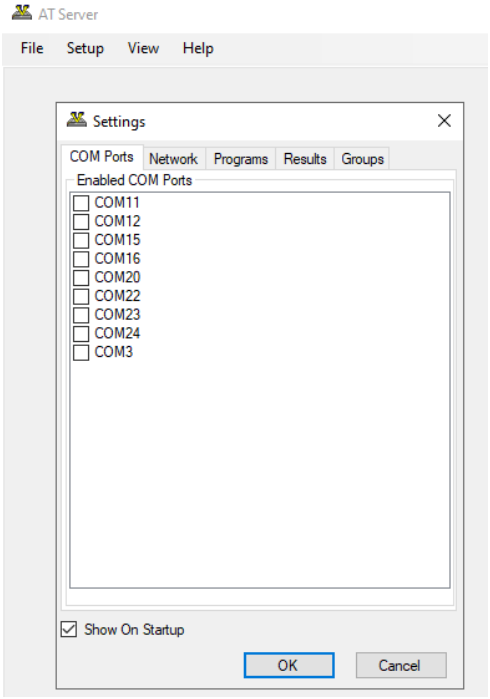
2.3. Starting for the first time

2.3.1. Running the software

When the installation of the software has been completed, you will see the Server icon in the program group 'Voltech Instruments'

Double-click this icon to start the program.

The first time the program runs it will show the communications configuration screen.



For full details of the communications configuration, please see later in this document.

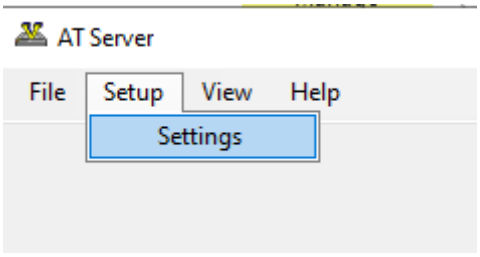
The check box 'Do not display this dialogue at Startup' exists to prevent it from being displayed each time the Server application is launched. When this option is activated, this dialogue box can be accessed via the Setup > Settings menu.

2.3.2. Initial Configuration

Before starting to use the software, it is recommended to configure the options. Section 2.4 provides a step-by-step instruction to configure the Server software for proper operation.

2.4. Setting up the Options

All Server software options are configured through the Setup menu as shown.

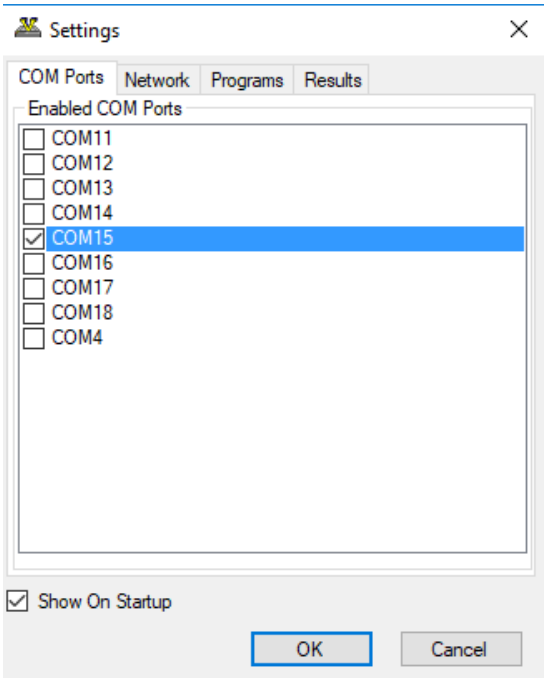


2.4.1. COM Ports Tab (RS232 only)

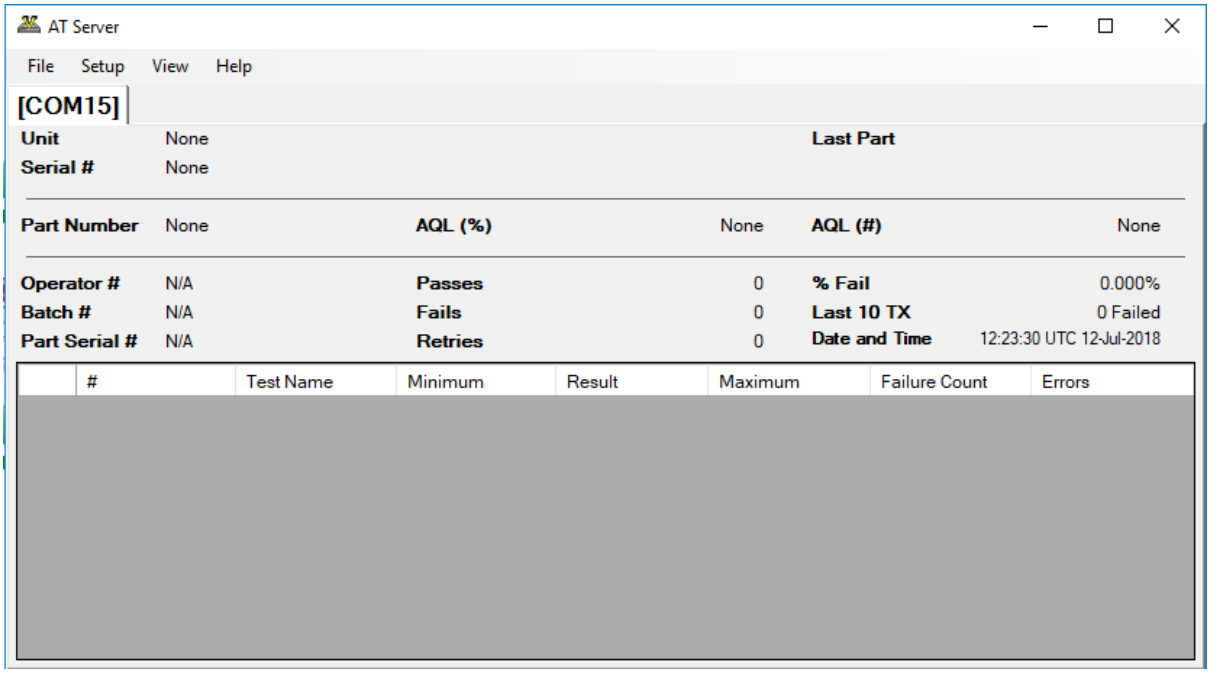
The COM Ports dialog may be displayed when the software starts up or by using the **Setup >Settings** option from the Server menu

There are two methods for communicating with the AT5600. RS232 or Ethernet. The recommended method is using an Ethernet network connection. RS232 communications is also an option (as used for the AT3600 and ATi products.)

Clicking on clicking the COM port setting of the “Configure Server Communications” dialog will show a list of available PC COM ports as shown.



Select a COM port that is connected to the server port of an AT series tester, and then click the check box to add this AT to the list of open channels as shown.



If successful, a new results window will be displayed as shown above.
The title bar of the results window shows which testers results will be shown in this window (in this case, “AT on COM15”).
The Server software is now ready to communicate with the AT tester.

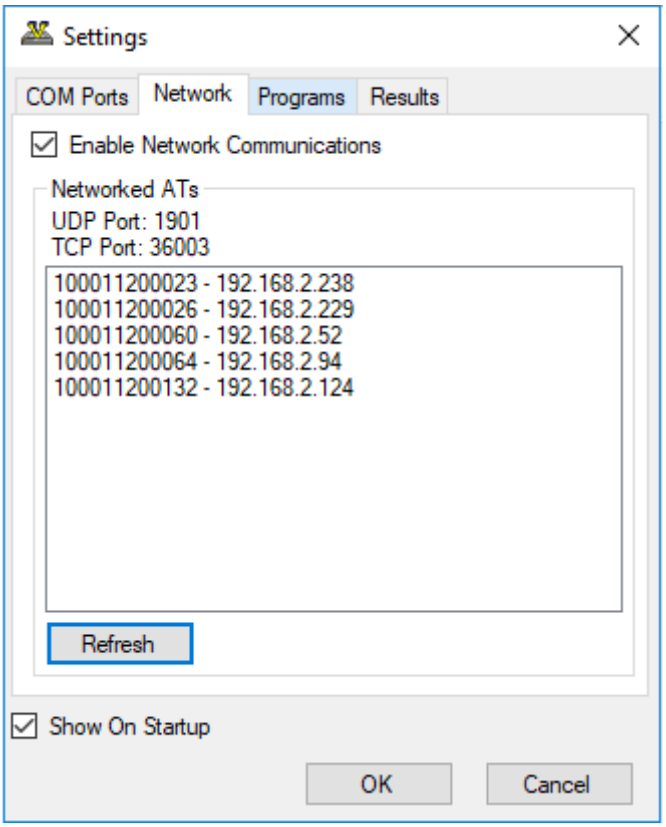
NOTE: So far, no communications will have taken place with the unit. To confirm it is set up correctly, communications must be assessed from the AT series tester.

2.4.2. Network Tab

The recommended method for communicating with an AT5600 is using Ethernet Network Communications

This will communicate over a standard TCP/IP Ethernet network using the Ethernet interface on the computer and AT5600.

To enable network communications, select the option to “Enable network communications”

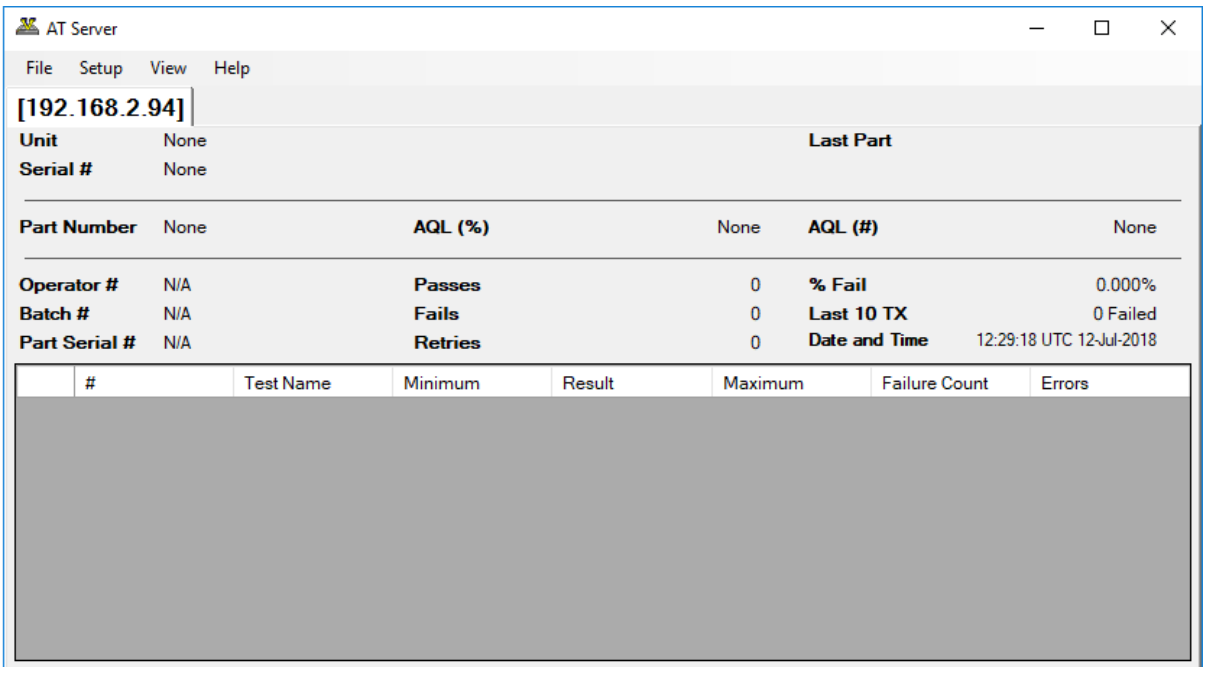


The REFRESH button will scan all available IP addresses and report which AT5600 are currently on the network and available for connection. See example above showing five units connected on different IP addresses.

When starting the server after enabling the network communications server, the computer firewall may give a warning and ask for permission for the server to communicate over the network. This must be allowed otherwise communications cannot take place.

With network communications, the results window is not shown UNTIL communication is initiated from the AT5600.

When initiated the results window title bar will identify the AT by the network IP address it has connected from.

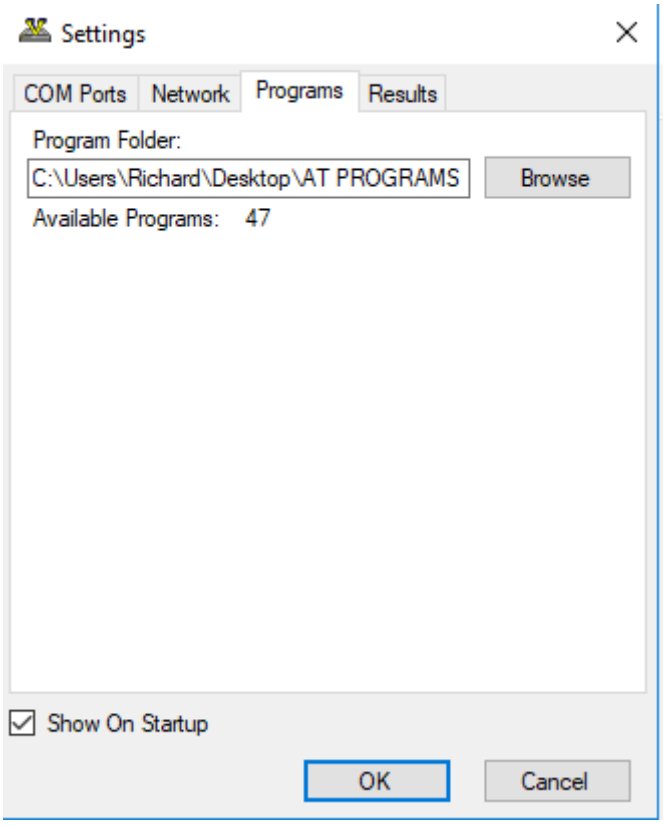


2.4.3. Programs Tab

This defines the directory where your *.ATP test program files will be fetched from.

These can be on a local PC or a network drive.

Change these settings using the BROWSE button if you wish to nominate your own program and results storage directories.



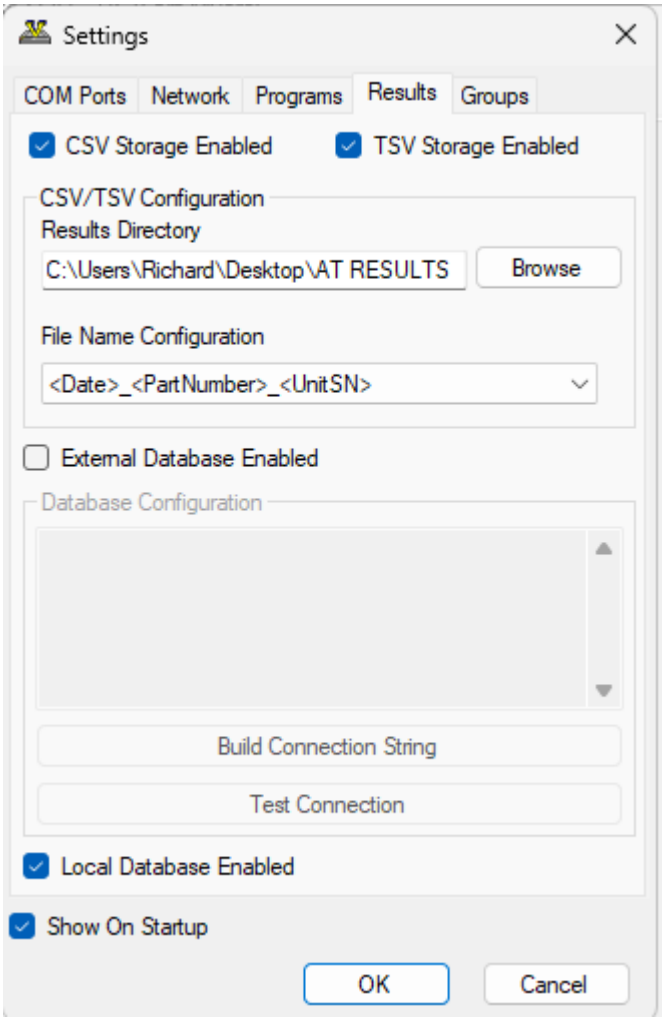
The setting of storage path directories may be altered at any time.

The number of valid ATP files in the directory are listed on the dialog box (e.g., 47 as shown above)

2.4.4. Results Tab

This Tab defines how and where the AT Server will save the Test Results.

You can choose these 4 following options independently of each other, by enabling the tick boxes.



;

2.4.4.1. CSV Storage Enabled

This will save the results as CSV files in the nominated directory.

As with programs this can be on the local PC or a network drive.

The results directory can only be changed when there is no communication. Close any open COM channels before attempting to change the results directory.

NOTE – The old legacy versions of AT SERVER store these as *.ATR (At results) but are in fact just CSV files with a different file extension.

To make these easier to work with (and automatically open in EXCEL or similar) the dotNET SERVER now saves as native CSV files.

The file names for the CSV files can be customized to your preference using the dropdown box to one of the three following formats.

<UnitSN>_<Date>_<PartNumber>.CSV

<Date>_<PartNumber>_<UnitSN>.CSV

<PartNumber>_<<Date>_<UnitSN>.CSV

<Date>.CSV

Where	UnitSN	last 4 digits of serial of AT
	Date	yyyymmddhhmmss
	ParrtNumber	The Test program name used on the AT.

This allows for much simple alpha sorting using windows on the results directory and allows results to be found without the need to search WITHIN the file contents, as with the old legacy AT SERVER results files.

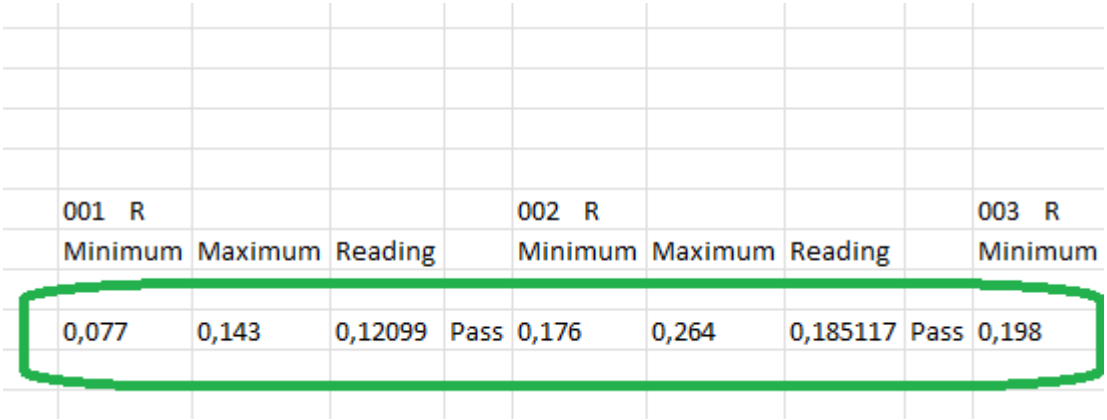
2.4.4.2. TSV Storage Enabled

NEW IN V 4.1.8440

If enabled, this will save the results as a TXT “Tab Separated Values” file in the nominated directory.

This has been added for better user experience for European customers who may wish to use the comma “,” as their decimal delimiter.

The TSV/TXT files are created using the PC settings, so if you have comma set as decimal character, this will be used.



001 R				002 R				003 R
Minimum	Maximum	Reading		Minimum	Maximum	Reading		Minimum
0,077	0,143	0,12099	Pass	0,176	0,264	0,185117	Pass	0,198

As with programs and CSV results this can be on the local PC or a network drive. The results directory can only be changed when there is no communication. Close any open COM channels before attempting to change the results directory.

The file names for the TXT files can be customized to your preference using the dropdown box to one of the three following formats.

<UnitSN>_<Date>_<PartNumber>.TXT

<Date>_<PartNumber>_<UnitSN>.TXT

<PartNumber>_<<Date>_<UnitSN>.TXT

<Date>.TXT

Where UnitSN last 4 digits of serial of AT
Date yyyymmddhhmmss
ParrtNumber Test program name used on the AT

This allows for much simple alpha sorting using windows on the results directory and allows results to be found without the need to search WITHIN the file contents, as with the old legacy AT SERVER results files.

2.4.4.3. External Database Enabled

This allows you to select and external database to connect to, and automatically send your results to

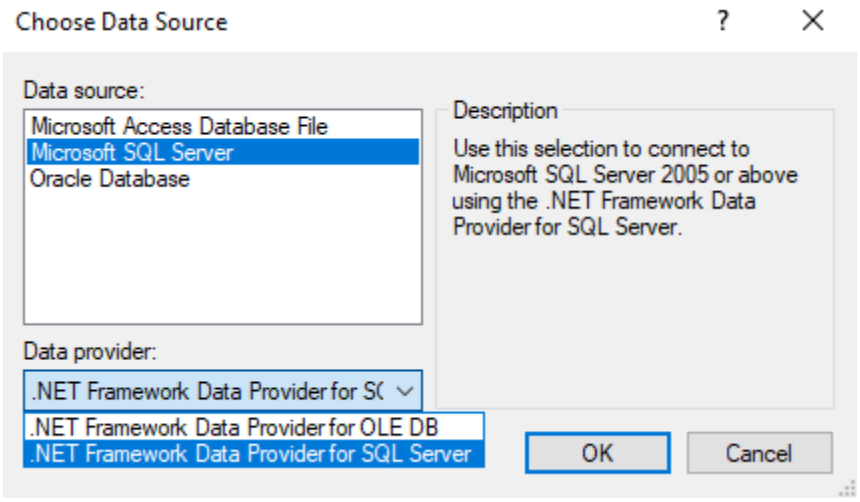
Full details of the database schema are in 2.5.4

To enable this

1, click the Database Enabled tick box

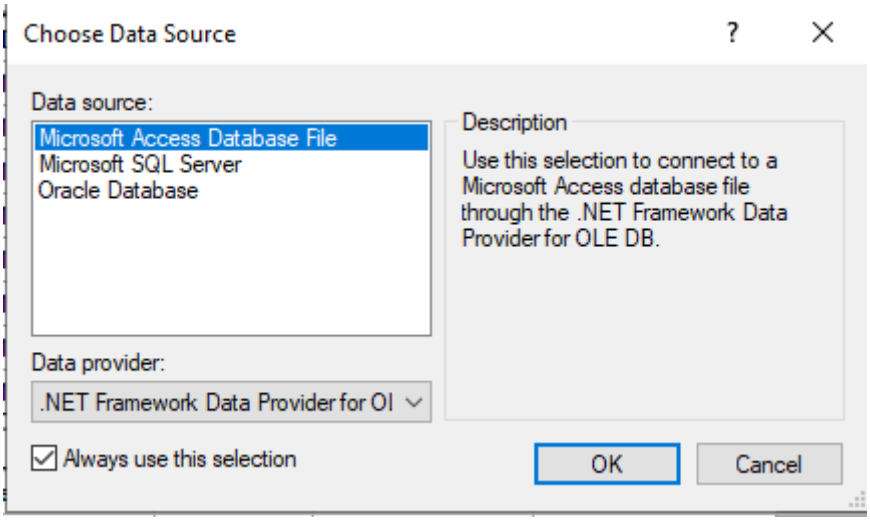
2, Click Build connection string

3, Choose your database type



Either Microsoft Access / MS SQL

4, Choose data provider



5 Click OK

6 You can then enter to specific credentials to connect to your chosen database.

7 Once completed use the TEST CONNETION button to verify that the AT SERVER and communicate to your database.

8 At this point the AT Server will automatically create the 4 required database tables if they do not already exist.

2.4.4.4. Local Database Enabled

This allows you to enable or disable your results being sent to the Microsoft LocalDB database on the AT server PC

If this is disabled, then no new results will be visible in the Report viewer (see 2.6)

2.5. Test Results

2.5.1. Receiving Test Results

By default, the AT series tester does not automatically send test results back to the server.

Results will only be sent back for test programs (*.ATP) that have been set up with the ‘Send Results to Server’ option enabled.

The server receives test results from the tester via the same serial or Ethernet connection used for transferring test programs to the tester.

Where more than one tester is connected to your server PC, the one server program handles all the transformer tester results as well as acting as the central program server.

2.5.2. Real-Time Monitoring

Each time a COM port to an AT series tester connection is opened (using the SETUP, COMMUNICATION menu), an accompanying result monitoring window will be created.

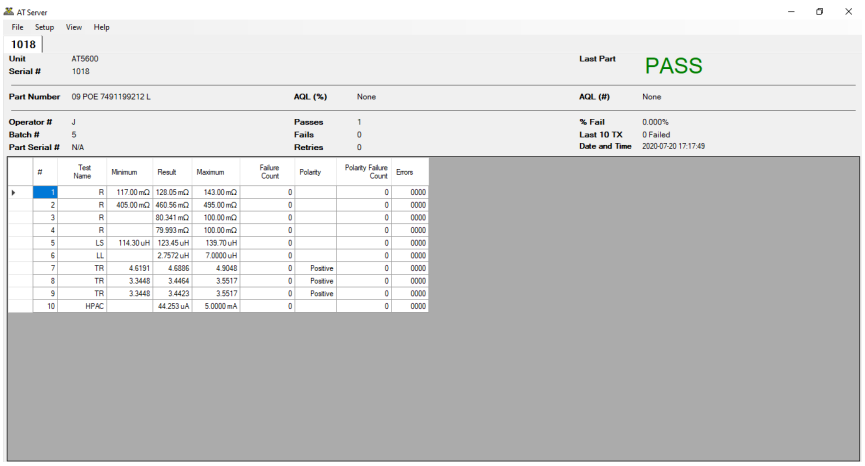
One result monitoring window will be present for each open AT or channel.

When results are sent from the tester (either RS232 or ETHERNET) they will be displayed in the monitoring window before passing to the CSV or DB results file (if enabled).

The most recent result for each channel will be visible in the window.

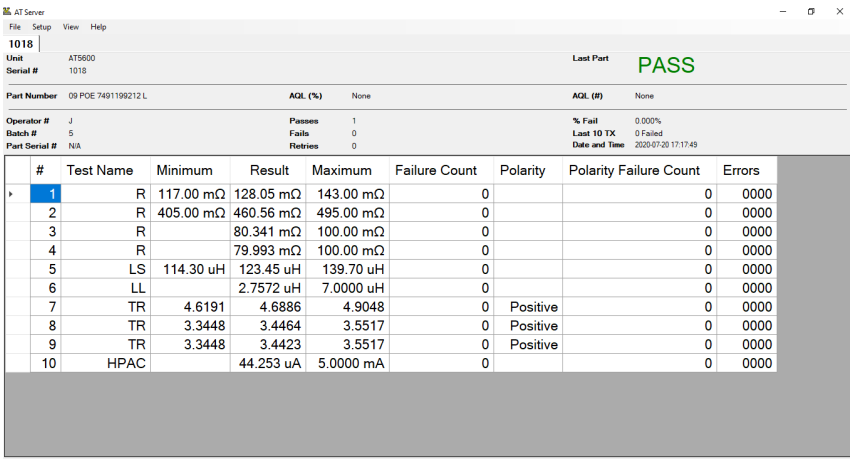
For ease of viewing, the font size can be changed via the View Menu> Font Size settings.

Font Size: Small



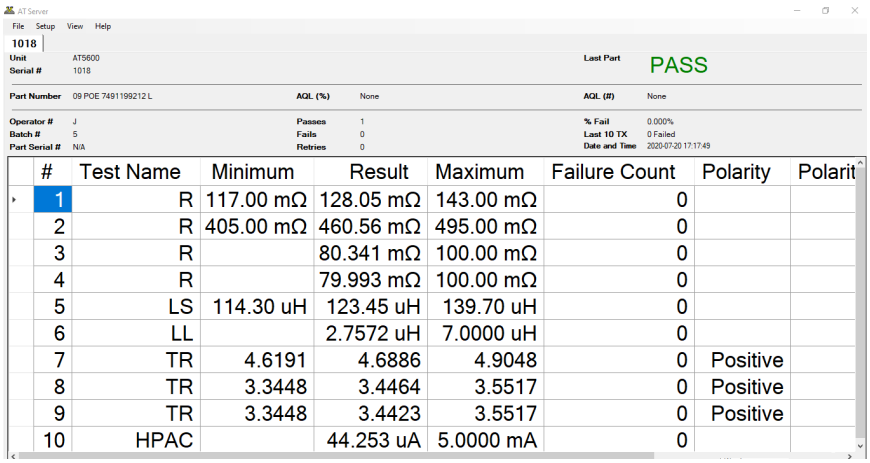
#	Test Name	Minimum	Result	Maximum	Failure Count	Polarity	Polarity Failure Count	Errors
1	R	117.00 mΩ	128.05 mΩ	143.00 mΩ	0		0	0000
2	R	405.00 mΩ	460.56 mΩ	495.00 mΩ	0		0	0000
3	R		80.341 mΩ	100.00 mΩ	0		0	0000
4	R		79.993 mΩ	100.00 mΩ	0		0	0000
5	LS	114.30 uH	123.45 uH	139.70 uH	0		0	0000
6	LL		2.7572 uH	7.0000 uH	0		0	0000
7	TR	4.6191	4.6886	4.9048	0	Positive	0	0000
8	TR	3.3448	3.4464	3.5517	0	Positive	0	0000
9	TR	3.3448	3.4423	3.5517	0	Positive	0	0000
10	HPAC		44.253 uA	5.0000 mA	0		0	0000

Font Size: Medium



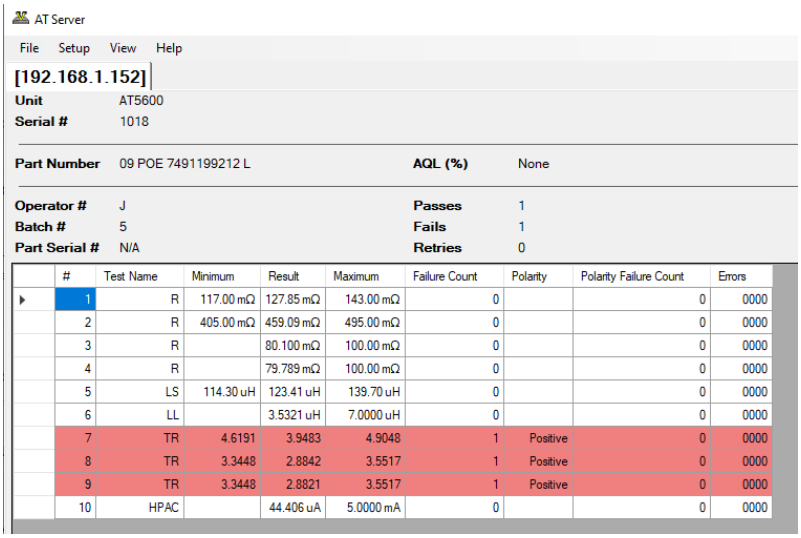
#	Test Name	Minimum	Result	Maximum	Failure Count	Polarity	Polarity Failure Count	Errors
1	R	117.00 mΩ	128.05 mΩ	143.00 mΩ	0		0	0000
2	R	405.00 mΩ	460.56 mΩ	495.00 mΩ	0		0	0000
3	R		80.341 mΩ	100.00 mΩ	0		0	0000
4	R		79.993 mΩ	100.00 mΩ	0		0	0000
5	LS	114.30 uH	123.45 uH	139.70 uH	0		0	0000
6	LL		2.7572 uH	7.0000 uH	0		0	0000
7	TR	4.6191	4.6886	4.9048	0	Positive	0	0000
8	TR	3.3448	3.4464	3.5517	0	Positive	0	0000
9	TR	3.3448	3.4423	3.5517	0	Positive	0	0000
10	HPAC		44.253 uA	5.0000 mA	0		0	0000

Font Size: Large



#	Test Name	Minimum	Result	Maximum	Failure Count	Polarity	Polarit
1	R	117.00 mΩ	128.05 mΩ	143.00 mΩ	0		
2	R	405.00 mΩ	460.56 mΩ	495.00 mΩ	0		
3	R		80.341 mΩ	100.00 mΩ	0		
4	R		79.993 mΩ	100.00 mΩ	0		
5	LS	114.30 uH	123.45 uH	139.70 uH	0		
6	LL		2.7572 uH	7.0000 uH	0		
7	TR	4.6191	4.6886	4.9048	0	Positive	
8	TR	3.3448	3.4464	3.5517	0	Positive	
9	TR	3.3448	3.4423	3.5517	0	Positive	
10	HPAC		44.253 uA	5.0000 mA	0		

For ease of indication, any FAILED tests will be highlighted in red as below



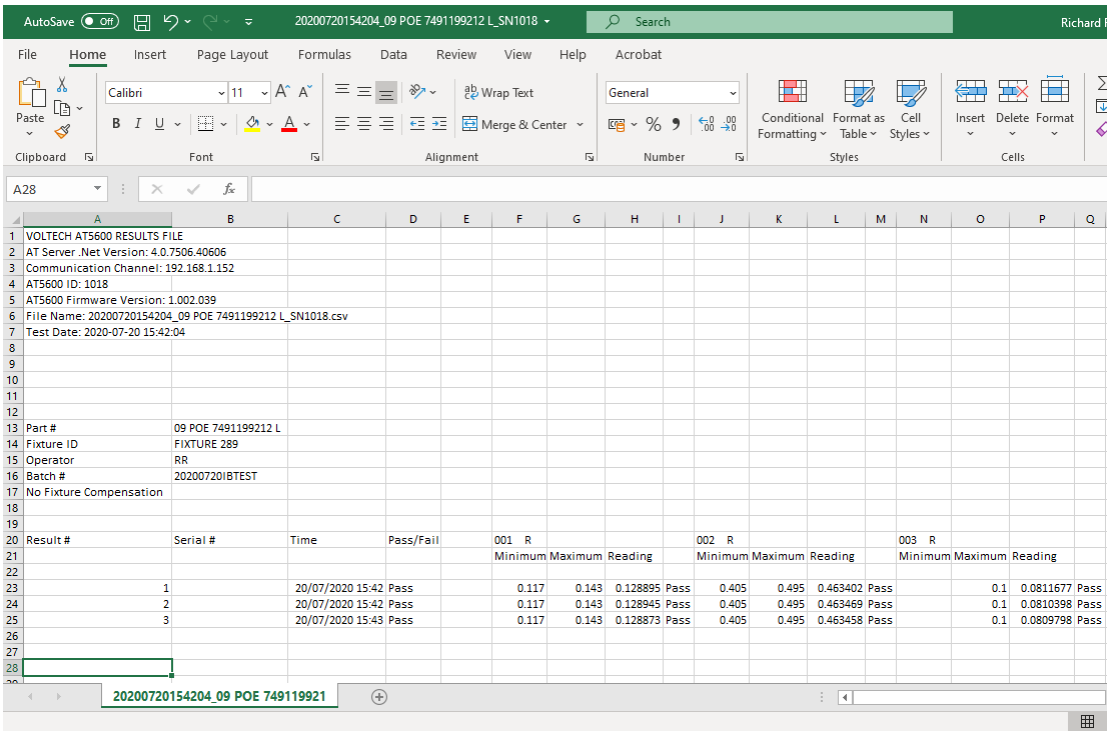
#	Test Name	Minimum	Result	Maximum	Failure Count	Polarity	Polarity Failure Count	Errors
1	R	117.00 mΩ	127.85 mΩ	143.00 mΩ	0		0	0000
2	R	405.00 mΩ	459.09 mΩ	495.00 mΩ	0		0	0000
3	R		80.100 mΩ	100.00 mΩ	0		0	0000
4	R		79.789 mΩ	100.00 mΩ	0		0	0000
5	LS	114.30 uH	123.41 uH	139.70 uH	0		0	0000
6	LL		3.5321 uH	7.0000 uH	0		0	0000
7	TR	4.6191	3.9483	4.9048	1	Positive	0	0000
8	TR	3.3448	2.8842	3.5517	1	Positive	0	0000
9	TR	3.3448	2.8821	3.5517	1	Positive	0	0000
10	HPAC		44.406 uA	5.0000 mA	0		0	0000

2.5.3. Saving results as CSV

CSV results will be saved automatically to your chosen results folder as specified in 2.4.4.1, if the Server CSV option is enabled AND the ATP test program also has the “Send results to Server” option enabled.

These can then be opened in EXCEL, Notepad, or any CSV viewer as below.

Please note that if a batch is still being run, and the results file still being used by the AT SERVER, then the file will be locked and only open as read only, until the AT Server releases the file.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	VOLTECH AT5600 RESULTS FILE																
2	AT Server .Net Version: 4.0.7506.40606																
3	Communication Channel: 192.168.1.152																
4	AT5600 ID: 1018																
5	AT5600 Firmware Version: 1.002.039																
6	File Name: 20200720154204_09 POE 7491199212 L_SN1018.csv																
7	Test Date: 2020-07-20 15:42:04																
8																	
9																	
10																	
11																	
12																	
13	Part #	09 POE 7491199212 L															
14	Fixture ID	FIXTURE 289															
15	Operator	RR															
16	Batch #	20200720IBTEST															
17	No Fixture Compensation																
18																	
19																	
20	Result #	Serial #	Time	Pass/Fail		001 R				002 R				003 R			
21						Minimum	Maximum	Reading		Minimum	Maximum	Reading		Minimum	Maximum	Reading	
22																	
23	1		20/07/2020 15:42	Pass		0.117	0.143	0.128895	Pass	0.405	0.495	0.463402	Pass		0.1	0.0811677	Pass
24	2		20/07/2020 15:42	Pass		0.117	0.143	0.128945	Pass	0.405	0.495	0.463469	Pass		0.1	0.0810398	Pass
25	3		20/07/2020 15:43	Pass		0.117	0.143	0.128873	Pass	0.405	0.495	0.463458	Pass		0.1	0.0809798	Pass
26																	
27																	
28																	

2.5.4. Saving Results to an External Database

2.5.4.1. Introduction

The AT Server software can also store test results in an external database (SQL, MS Access).

This provides a powerful and versatile method of recording and analyzing test results historically or on-line.

The AT Server uses standard Windows methods to connect to a variety of databases that conform to these specifications.

Once stored in a database the data may then be analyzed using tools available in the database application or tools provided by specialist software packages such as those available for SPC (Statistical Process Control).

One example of this is to monitor in real time the trend in a winding resistance to identify a defective drum of copper. You would then be able to rectify the fault during production rather than producing a large stock of QA failed transformers all wound with the defective wire.

2.5.4.2. Database Tables

The server software automatically creates the following tables in the selected database (if they do not already exist) and stores data within the tables using the structure defined here.

This is true for ALL test programs, regardless of how many tests are in the programs, or the types of tests used in each individual test program.

The tables store all the information that is available concerning the results (including time, date, limits, operator etc.) in a very compact and efficient structure over 4 tables.

Note that new data is not necessarily appended to the end of a table; it may appear anywhere within.

Table:	**tblVoltechATUnitID**	
Field	**Format**	**Notes**
ATUnitID	**Text (25)**	**Index ID**
UnitType	Text (10)	AT5600, AT3600, AT1600, ATi
UnitID	Text (10)	Unit Serial Number
FirmwareID	Text (10)	Unit Firmware Version

Table:	**tblVoltechRunID**	
Field	**Format**	**Notes**
RunID	**Text (25)**	**Index ID**
Date	Date/Time (Short Date)	Date of Test Run
Time	Date/Time (Long Time)	Time of Test Run
ATUnitID	Text (25)	**As tblVoltechATUnitID.ATUnitID**
PartID	Text (25)	Part name
FixtureID	Text (25)	Fixture name

OperatorID	Text (25)	Operator name
BatchID	Text (25)	Batch name
TransformerSerial No	Text (25)	Transformer serial number
OverallResult	Text (10)	PASS/FAIL/RE-RUN/ABORT Overall test pass or fail result and Re-Run result.

Table:	**tblVoltechResults**	
Field	**Format**	**Notes**
ResultID	**Text (25)**	**Index ID**
RunID	Text (25)	**As tblVoltechRunID.RunID**
TestID	Text (25)	**As tblVoltechTestID.TestID**
TestNo	Number (Long Integer)	Test number as in test program
OC_Comp	Text (5)	YES, NO, N/A Open Circuit Compensation status
SC_Comp	Text (5)	YES, NO, N/A Short Circuit Compensation status
Load_Comp	Text (5)	YES, NO, N/A Load Compensation
Result	Number (Single)	Actual test result
TestStatus	Text (5)	DSP Status for test
PassFail	Text (5)	PASS/FAIL Individual test pass or fail result

Table:	tblVoltechTestID	
Field	**Format**	**Notes**
TestID	**Text (25)**	**Index ID**
TestMnemonic	Text (10)	Individual test mnemonic
TestUnits	Text (10)	Individual test units
CheckType	Text (5)	NONE/MIN/MAX/DIFF/POL Type of test limits (see *)
MinLimit	Number (Single)	Minimum limit for test (see *)
MaxLimit	Number (Single)	Maximum limit for test (see *)

(CheckType = MIN) If there is a Min limit only, MaxLimit = 0

(CheckType = MAX) If there is a Max limit only, MinLimit = 0

(CheckType = DIFF) If there is a Min and Max limit

(CheckType = POL) Polarity test
If Positive Polarity test, MinLimit = 0 and MaxLimit = 1
If Negative Polarity test, MinLimit = -1 and MaxLimit = 0

The primary Key IDs for the database storage are strings based on the following pattern:

PPyyyyMMddHHmmssRRRRRRRR, where,

PP two digits representing the COM port number that the AT is on.
yyyy the four-digit year the entry was created.
MM the two-digit month the entry was created.
dd the two-digit day the entry was created.
HH the two-digit hour (0-23) the entry was created.
mm the two-digit minute the entry was created.
ss the two-digit second the entry was created.

RRRRRRRR is a 32-bit random number expressed in hexadecimal notation with characters 0-9 and A-F.

2.5.4.3. Use of data in Database

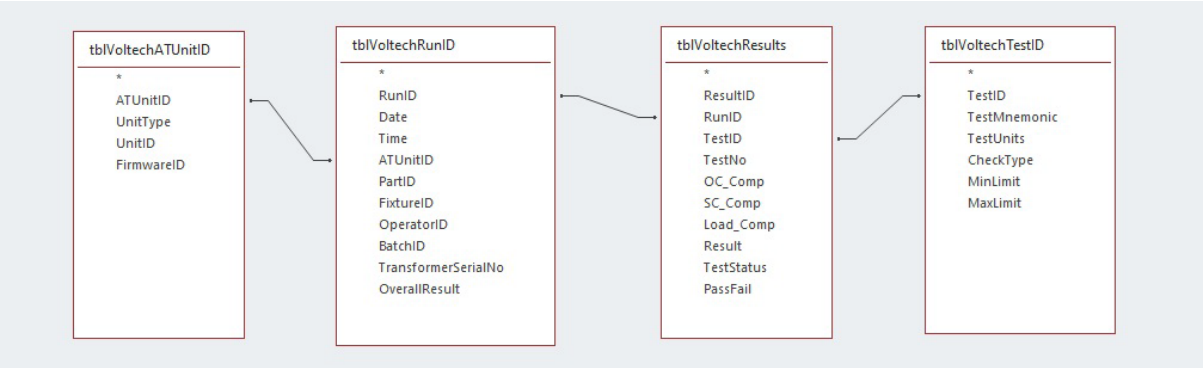
Once an AT Server to database connection has been made, it is possible to either

A, write your own queries, forms, and reports to extract the data in the database

Or

B, write the queries/forms/reports in a separate database and link to the actual results data in your live database

The relationship between the 4 data tables is remarkably simple and expressed below.



2.6. LocalDB Database + Report Generator

2.6.1. LocalDB Location

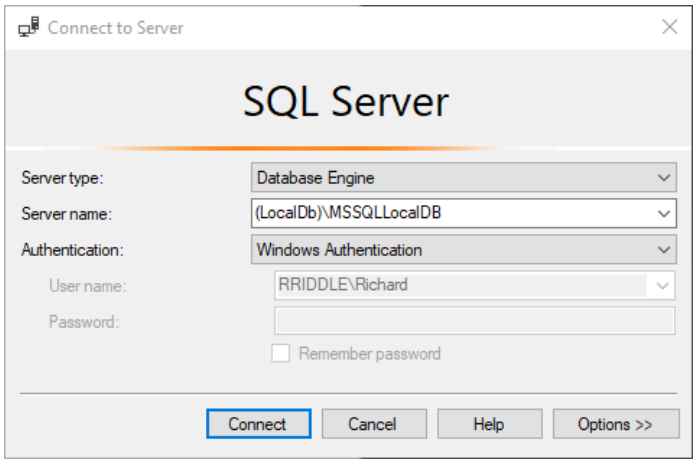
As explained in section 1.1, the AT SERVER dotNET also has a NEW built-in MS LocalDB database that is always running in the background.

This saves the results on the local PC ONLY, in the same 4 table structure as an external database (see 2.5.4 for definition of tables)

Data base location %AppData%\AT Server .NET\

Database file name ATResults.mdf

The database can be connected to using a variety of tools, for example MS SQL SERVER MANAGEMENT STUDIO, using the path (LocalDb)\MSSQLLocalDB



2.6.2. LocalDB Reporting

Customers can take advantage of the LocalDB without ANY knowledge of databases using the free built in Results Viewer

To enable this, select VIEW>REPORT on the menu

2.6.2.1. Selecting and filtering data

1, Select Part Number and Date Range

First, select the Test program / Part number from the drop-down list.

This shows all test programs which have valid results in the internal database

Then, optionally select a date range for the results if you wish to narrow further.

2, Choose Optional Filters

Batch number

If you have used the batch number option in the ATP test program, results can be further filtered here. The drop-down box will show a valid list of your entered batch numbers for the chosen part number.

Pass/Fail/Rerun/Abort tick boxes.

Results can be further filtered using the four tick boxes.

3, Refresh data

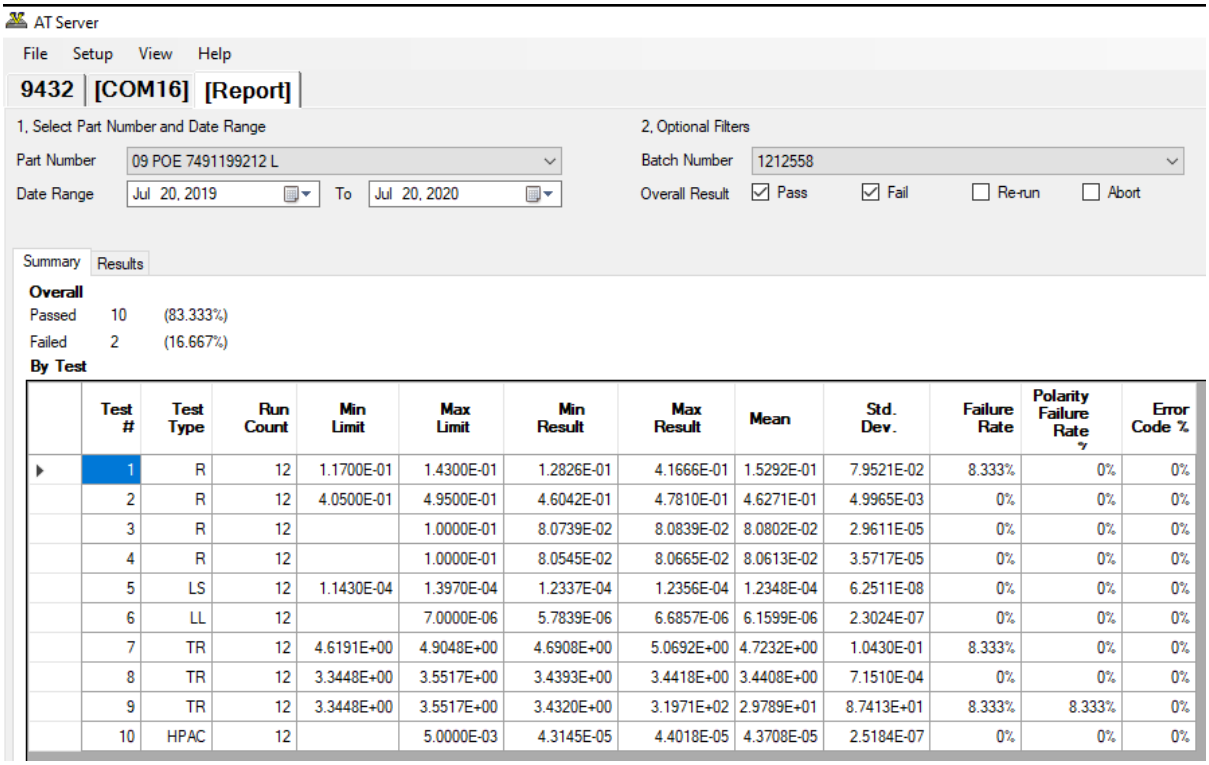
Once you have chosen the filters you need, press refresh to update the Summary and Results tabs below.

2.6.2.2. Summary Tab

The Summary Tab provides an overview of the test data, defined by the filters you have applied.

It shows a summary of the tests executed, the limits applied, the failure rate by test, and the mean and standard deviation of the results.

The standard deviation convention used is SDev.P – the population standard deviation.



	Test #	Test Type	Run Count	Min Limit	Max Limit	Min Result	Max Result	Mean	Std. Dev.	Failure Rate	Polarity Failure Rate %	Error Code %
▶	1	R	12	1.1700E-01	1.4300E-01	1.2826E-01	4.1666E-01	1.5292E-01	7.9521E-02	8.333%	0%	0%
	2	R	12	4.0500E-01	4.9500E-01	4.6042E-01	4.7810E-01	4.6271E-01	4.9965E-03	0%	0%	0%
	3	R	12		1.0000E-01	8.0739E-02	8.0839E-02	8.0802E-02	2.9611E-05	0%	0%	0%
	4	R	12		1.0000E-01	8.0545E-02	8.0665E-02	8.0613E-02	3.5717E-05	0%	0%	0%
	5	LS	12	1.1430E-04	1.3970E-04	1.2337E-04	1.2356E-04	1.2348E-04	6.2511E-08	0%	0%	0%
	6	LL	12		7.0000E-06	5.7839E-06	6.6857E-06	6.1599E-06	2.3024E-07	0%	0%	0%
	7	TR	12	4.6191E+00	4.9048E+00	4.6908E+00	5.0692E+00	4.7232E+00	1.0430E-01	8.333%	0%	0%
	8	TR	12	3.3448E+00	3.5517E+00	3.4393E+00	3.4418E+00	3.4408E+00	7.1510E-04	0%	0%	0%
	9	TR	12	3.3448E+00	3.5517E+00	3.4320E+00	3.1971E+02	2.9789E+01	8.7413E+01	8.333%	8.333%	0%
	10	HPAC	12		5.0000E-03	4.3145E-05	4.4018E-05	4.3708E-05	2.5184E-07	0%	0%	0%

Note:
Columns can be resized or dragged and dropped to reorder them to suit your own preferences.

Clicking on a column heading will sort the data alpha-numerically.

Data can be extracted by

A, selecting the top left square to select the entire grid, Then

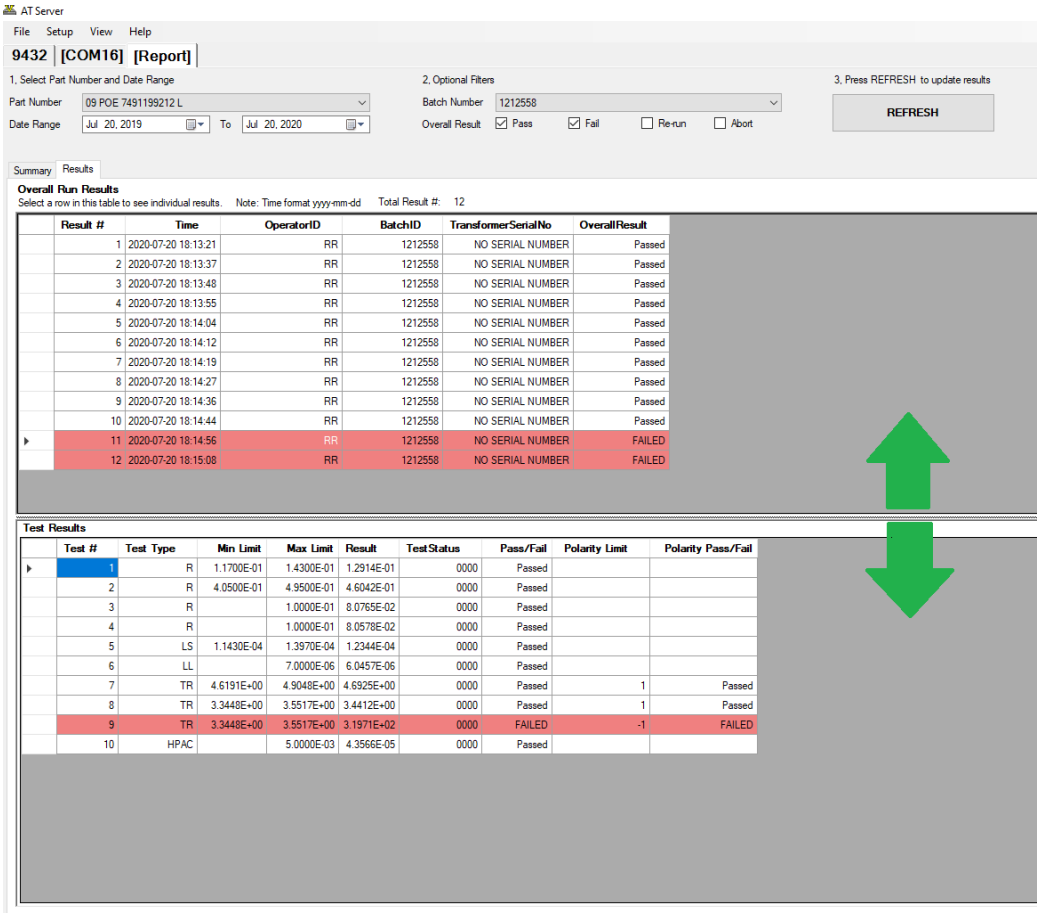
B using standard MS Windows Copy (CTRL+C) and Paste (CTRL+V) into EXCEL or Notepad.

2.6.2.3. Results Tab

The Results Tab then allows you to further analyse and inspect the results.

The screen is split into two sections horizontally.

The dividing line between “Overall Run Results” and “Test Results” can be moved up or down by hovering over the dividing line, clicking, and holding, and then dragging the divide up or down

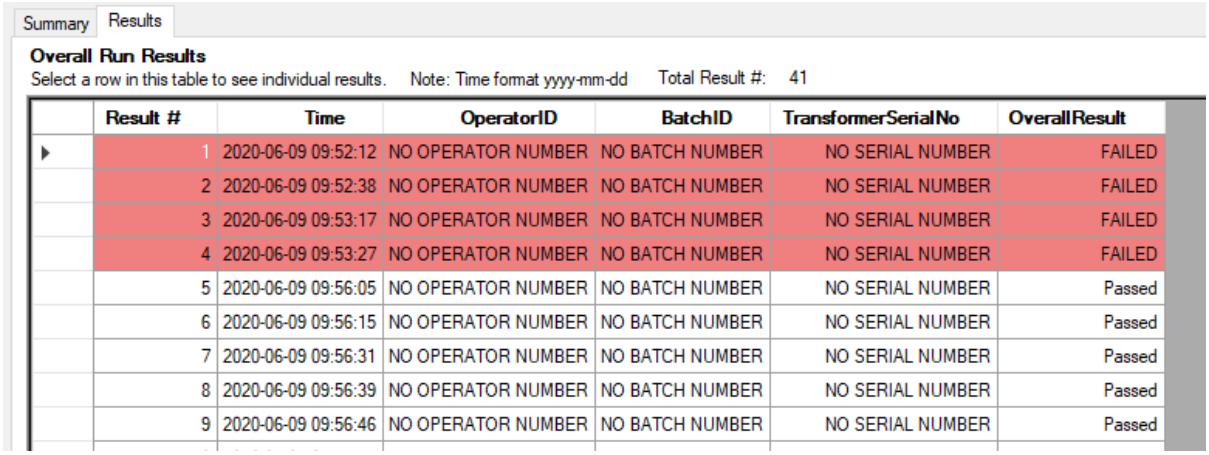


2.6.2.4. Overall Run Results

The top of the screen “Overall Run Results” shows a list of each test run for the selected part.

This shows the time of recording, and overall result.

Any test runs that have an overall FAIL result will be highlighted RED.



Result #	Time	OperatorID	BatchID	TransformerSerialNo	OverallResult
1	2020-06-09 09:52:12	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	FAILED
2	2020-06-09 09:52:38	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	FAILED
3	2020-06-09 09:53:17	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	FAILED
4	2020-06-09 09:53:27	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	FAILED
5	2020-06-09 09:56:05	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	Passed
6	2020-06-09 09:56:15	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	Passed
7	2020-06-09 09:56:31	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	Passed
8	2020-06-09 09:56:39	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	Passed
9	2020-06-09 09:56:46	NO OPERATOR NUMBER	NO BATCH NUMBER	NO SERIAL NUMBER	Passed

If the Serial/Batch/Operator options were enabled in the test program, then this data is also displayed.

Columns can be resized or dragged and dropped to reorder them to suit your own preferences.

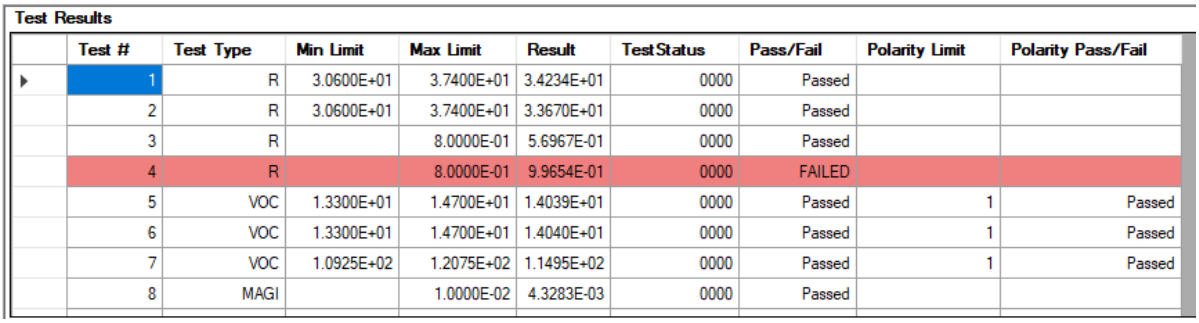
Clicking on a column heading will sort the data alpha-numerically.

Clicking on a specific row in the top half of the screen will then display the collected results for the SELECTED RUN in the bottom half of the screen (“Test Results”)

2.6.2.5. Test Results

This bottom section of the screen displays the full data collected for a specific selected test run, which has been selected in the top half of the screen.

Any individual tests that have failed will be highlighted RED.



Test Results

Test #	Test Type	Min Limit	Max Limit	Result	TestStatus	Pass/Fail	Polarity Limit	Polarity Pass/Fail
1	R	3.0600E+01	3.7400E+01	3.4234E+01	0000	Passed		
2	R	3.0600E+01	3.7400E+01	3.3670E+01	0000	Passed		
3	R		8.0000E-01	5.6967E-01	0000	Passed		
4	R		8.0000E-01	9.9654E-01	0000	FAILED		
5	VOC	1.3300E+01	1.4700E+01	1.4039E+01	0000	Passed	1	Passed
6	VOC	1.3300E+01	1.4700E+01	1.4040E+01	0000	Passed	1	Passed
7	VOC	1.0925E+02	1.2075E+02	1.1495E+02	0000	Passed	1	Passed
8	MAGI		1.0000E-02	4.3283E-03	0000	Passed		

Columns can be resized or dragged and dropped to reorder them to suit your own preferences

Clicking on a column heading will sort the data alpha-numerically.

Data can be exported using standard MS Windows Copy (CTRL+c) and Paste (CTRL+v) into EXCEL or Notepad.

3. Change Log

Please find below change history for this user manual and AT Server.

Both these items are free to download from our website, free of charge, for all users.

Voltech Instruments are committed to a policy of continuous product improvement and development. Hence, product specification and the information given in this manual are subject to change.

The below will give an overview of improvements, new features, and corrections.

3.1. AT SERVER dotNET software

V4.0.8473

Menu labelling
Change "report" to be "Report (Local DB)" for clearer understanding that the build in report generator only looks to the local DB on the PC, not to any external DB you may also have enabled.

SQL – tblVoltechTestID.TestUnits
Fixed missing SQL data for R test Add check datatype to DB and change.

SQL tables created by V3 of the server used “varchar(x)” which only supported ASCII.
SQL tables created by V4 of the server have always used nvarchar(x) which supports UNICODE.
As V4 now uses the “Ω” symbol rather than “ohms” this mean that users connecting V4 server to older legacy SQL databases would have missing entries on tblVoltechTestID.

This update now performs a silent test on any connect SQL database and updates the data types from varchar to nvarchar silently.

V4.0.8440

Results - add 4th optional results option "TSV" to make TAB separated values file, (as TXT); this allows easier use in EUR where comma is delimiter.
Default on first install for this is OFF
Use WINDOWS SYSTEM CULTURE for Dates/Time and numeric format (e.g., comma for decimal in Europe).

File output
add two more file name options so BATCH is visible in file name if used
<Date>_<Batch #>_<UnitSN>
<Date>_<Batch #>_<PartNumber>_<UnitSN>.

Fixed printing- previously was always in TAB 1, but now printing is the active selected tab.

Menu labelling - change "report" to be "Report (Local DB)" for clearer understanding that the build in report generator only looks to the local DB on the PC, not to any external DB you may also have enabled.

Fixed missing SQL data for R test - Add check datatype to DB and changed.

Fixed occasionally getting TCP client error message.
Server crashed when some REGION settings used.
Fixed unhandled exception rather than crashing silently.
Fixed Server silently fails on run.
Added more proactive checks server if unable to start properly.

If you are experiencing a crash on startup, then delete all the directories that start with the name "AT_Server_.Net..." in the location "C:\..\..\AppData\Local\Voltech_Instruments"

V4.0.8244

Better handling of invalid characters in program names when writing CSV results. This previously resulted in a crash if a Windows reserves character (e.g., “%” or “/” was used in a program name. these are now silently replaced with a “-“

add 4th simpler option of “<date> only” for CSV file names.

print preview of results fixed.

V4.0.7957

local DB can now be enabled or disabled by user.

Fixed initialization bug for PC with multiuser log ins.

Tidy up of print preview of all reports.

3.2. AT SERVER dotNET manual

V5
Updated for 4.1.8473 release.

V4
2.4.4.2 added new TSX / TXT file format.

V 3
2.5.4.3 updated to give table relationships for SQL /Access results.
2.4.4.1 updated to have <Date> only options for CSV filename

V 2
LocalDB can now be enabled or disabled by user. See 2.4.4.3

V 1
Initial Release