



Industrial Batteries and Energy Storage

VALEN BATTERY TESTERS BROCHURE 22



AUSTRALIA
1300 734 253
sales@valen.com.au
www.valen.com.au

NEW ZEALAND
0800 734 253
sales@valen.co.nz
www.valen.co.nz



3 Ways to Test Batteries

Pulse Load Testing

For a quick indication of a small-medium battery capacity, a pulse load test is applied allowing for easy instantaneous results.

Load

Is conducted by means of a full discharge to the battery, ensuring peace of mind that the battery will hold up in its required application.

Impedance

Measuring the impedance of a battery is a reliable indicator of the health of a battery and is taken as a comparative reading.



Pulse Load Testing

What is pulse load testing?

Pulse load testing is a form of battery testing where the tester does short bursts of current, drawing from the battery and then uses an internal algorithm to determine the capacity of the battery.

Why would you use pulse load testing?

Pulse load testing is predominately used in applications where the technician does not have the time to conduct the full load test or where it would not be efficient or cost-effective to do so.

Who would use pulse load testing?

Valen would mainly recommend Pulse Load Testing for fire and security, door automation or small UPS applications. These are all applications where the battery is on a constant charge and where smaller batteries with the tab (spade) terminals are utilised, normally up to a 12V21Ah



Constant Load Testing

Constant current load testing is when a current can be set on a battery tester and no matter what the voltage does, the current will stay the same, over against a carbon pile tester which drops the voltage as the current drops. Constant Current Load Testing produces an absolute result, therefore is often used by manufacturers to specify the exact Battery Capacity, and Quality Assurance Teams to ensure that their product supply is up to standard.

Why would you use a Constant Current Load Tester?

To test the true capacity of a battery. It can be used in Quality Assurance to confirm the battery's true capacity over against the battery manufacturers specification sheet, as well as in maintenance applications to ascertain the battery's infield performance

Who would use Constant Current Load Tester?

Valen recommends the CCOLT Battery Load Testers are utilised in markets such as Mobility, Cleaning & Fire. These Industries regularly supply and service the same equipment, therefore it is beneficial to be able to conduct a full discharge test to simulate the real-life field test scenario, allowing the technician to problem solve the issue. For example a load of 5A over 10hours, you could simulate on the tester

Impedance Testing

What is Impedance testing?

Impedance testing is where an AC signal is injected into a DC battery to check the internal resistance of a battery. The most important thing to note is that it is an AC signal, not a DC signal, which is resistance testing.

Why would you use impedance testing?

Impedance Testing is utilised in applications where the batteries cannot be removed or disconnected from their installation for testing.

This could be in a UPS or communication site holding up critical infrastructure.

Who would use impedance testing?

Utility companies, telecommunication, UPS technicians to name a few. Impedance testing is suitable for anyone that's testing larger batteries and systems on a regular service schedule.

Indicative Tester

Chrome IBT

Small, quick and intuitive

The Chrome Intelligent Battery Tester (IBT) provides DC Voltage and available Ampere Hour (Ah) capacity of a battery within seconds. Easily portable and powered by the battery under test, the Chrome IBT provides instant results which require no user interpretation. A low and high voltage warning is also displayed to assist the technician with analysing the batteries current state.

Chrome Intelligent Battery Tester is designed for use on small AGM batteries.



Features

Pocket-Sized

Chrome IBT units are pocket-sized for easy transportation and adding to technicians toolkit

Fast Return

Delivering fast results, the Chrome IBT enables technicians to save time on site

Simply and Quick to Use

Easily attach the Chrome IBT to the battery by sliding on the terminal clamps for an instant reading

Minimise Replacement

Chrome IBT minimises the number of battery replacements saving costs and the environment

Instantaneous Results

Instantaneous results allow technicians equipped with the Chrome IBT to increase battery sales as clients can see their current battery state

Calibration Kits

Chrome IBT calibration kits are available; recalibration recommended annually



Specifications

Product Code	BT12014
Operating Voltage	12VDC
Battery Types	Valve Regulated Lead Acid (VRLA)
Battery Sizes	1.2Ah to 200Ah*
Display	Backlit LCD
Dimensions	100x55x35
Weight	0.6kg

*However Valen recommends the Chrome IBT to test batteries up to 21Ah.

Indicative Tester

612 IBT

Small, quick and intuitive

The 612 Intelligent Battery Tester advances the Chrome IBT with its durable high impact ABS case protected by a rubber holster ideal for harsh working conditions. By giving a clear and accurate indication of a battery's Ah capacity available, the 612 IBT makes it easy to identify replacements quickly. An identification table printed on the tester shows standard battery sizes and what Ah capacity rate they should be recharged or replaced. The 612 IBT is designed to indicate the capacity on a range of VRLA AGM and Gel batteries.



Features

Pocket-Sized

612 IBT units are pocket-sized for easy transportation and adding to technicians toolkit

Fast Return

Delivering fast results, the 612 IBT enables technicians to save time on site

Simply and Quick to Use

Easily attach the 612 IBT to the battery by sliding on the terminal clamps for an instant reading

Flexibility

Flexibility of the 612 IBT allow users to test a broader range of 6V and 12V batteries

Minimise Replacement

612 IBT minimises the number of battery replacements saving costs and the environment

Instantaneous Results

Instantaneous results allow technicians equipped with the 612 IBT to increase battery sales as clients can see their current battery state

Calibration Kits

612 IBT calibration kits are available; recalibration recommended annually



Specifications

Product Code	BT12012
Operating Voltage	6 & 12VDC
Battery Types	Valve Regulated Lead Acid (VRLA)
Battery Sizes	6V: 1.2Ah to 10Ah 12V: 1.2Ah to 100Ah
Display	Backlit LCD
Dimensions	84x170x41
Weight	0.8kg

*However Valen recommends the 612 IBT only tests up to 21Ah batteries

Load Tester

BACA 12V & 24V

Designed to test batteries and their battery chargers, the Valen Battery and Charger Analyser (BACA) is an invaluable instrument for technicians. The 12V and 24V BACA Testers simulate a full cyclic discharge test and automatically perform multiple cycles if connected to a compliant charger.

Demonstrating that a battery has the capacity required for its intended application as well as deciphering the performance of a battery charger can be a time-consuming and tedious process. The guesswork is taken away with these programmable Valen battery testers that can display results on an LCD screen or download graphic results for analysis. A printable report can be formatted with a customisable comments area and given to the end-user.



Features

Accurate

Valen 12V & 24V Battery and Charger Analyser (BACA), perform a full battery discharge test producing an accurate and absolute report on the battery performance and/or charger being tested.

Software

Easy to use software enables test results to be stored, exported to a PDF or printed. Reports can be customised with your company logo, testing details and comments so make ideal reports to be given to the end-user if required.

Ability to Cycle Unassisted

Valen BACA 12V and 24V units can complete up to 200 cycles unassisted and record the battery and/or charger performance data, enabling the user to set up the system and leave it to run tests, ultimately saving time on battery testing.

Flexible Range

The Valen BACA units are flexible and allow for testing of an extensive range of battery capacities from 0.8Ah to 200Ah.



Specifications

Operating Voltage	12 & 24VDC
Battery Types	The BACA tester can test any 12V or 24V battery technology including VRLA, LiFe PO4 and others
Discharge Current	1-25A
Display	LCD Screen
Dimensions	200x140x190
Weight	1.5kg

Product Code	Charging Time	Max. no. of Cycles
YBT10001	1h to 99h	200
YBT10002	1h to 99h	200

Load Tester

Captester

Valen Captester conducts a full cyclic discharge battery test giving the battery user accurate knowledge of their exact battery capacity.

Designed with the Mobility Market in mind, The Captester has the ability to test individual 12V batteries and 24V Battery Chargers. This will enable Mobility Scooter and Electric Wheelchair Repairers to ascertain and analyse which battery or charger is cause of the problem. Test results are then able to be viewed on the Captester LCD screen, or downloaded then stored on your PC. A printed copy with customisable comments area may be given to the end user allowing them to see a clear picture of their system performance.

A truly reliable battery and charger test, the Captester takes away the guesswork and has become the number one handy battery tool for Mobility Repair agencies.



Features

Accurate

Valen Battery and Charger Analyser (BACA) and Captesters, all perform a full battery discharge test producing an accurate and absolute report on the performance of the battery and/or charger under test

Software

Easy to use software allows for data and tests results to be stored, exported to PDF or printed for the analysis of batteries

Mobility in Mind

Valen Captester is designed specifically with the mobility market in mind allowing the user to test individual 12V batteries as well as their 24V charger

Flexible Range

The Valen BACA and Captester units are flexible and allow for testing of an extensive range of battery capacities from 0.8Ah to 200Ah

Percentage Results

Unlike the BACA Battery tester, the Captester allows the user to view the results as a percentage of the full capacity. No table is needed to ascertain the C1 capacity of the battery, instead the capacity as stated on the battery is entered into the tester, and the final result is displayed as a percentage of original capacity making it user friendly especially in applications such as mobility where the original battery capacity can vary between manufacturers.



Specifications

Operating Voltage	12 & 24VDC
Display	LCD Display
Dimensions	200x140x190mm
Weight	2kg

Product Code	Charging Time	Max. no. of Cycles
YBT10003	1h to 99h	1

Load Tester

CCOLT

The Valen Constant Current Load Tester (CCOLT) is designed for use on larger batteries and battery systems testing their performance by applying a constant current load. Current drain, cut-off voltage and duration can be manually pre-set with the CCOLT monitoring voltage and time elapsed during a test to give an absolute and accurate result of the battery performance. The CCOLT will automatically disconnect the load once the selected cut-off voltage is reached. Tests may be downloaded via software for filing, reporting or analysing the results.

A hard protective carry case with foam insert cut to the shape of the Valen CCOLT is also available. This case is ideal for technicians who need to travel to ensure the CCOLT remains protected and undamaged.



Features

Accurate

The Valen Constant Current Load Tester (CCOLT) performs a full battery discharge test producing an accurate and absolute report on the performance of the battery under test

Software

Easy to use software allows for data and tests from the Valen CCOLT to be stored, exported to PDF or printed for the analysis of batteries

Flexible Range

Valen CCOLT has the ability to test an extensive range of capacities from 1A up to 100A discharge rates, or right up to 160A on the 12V version

Test to the Fire Standard

Valen CCOLT is the preferred battery tester for testing in accordance to fire standard AS1851.2012

Hard Protective Case

A lightweight, lockable, protective carry case is also available to protect the Valen CCOLT



Specifications

Operating Voltage	12 to 48VDC
Battery Types	The CCOLT battery tester can test all 12V, 24V, 36V or 48V battery technologies including but limited to VRLA & LiFePO4 batteries
Battery Sizes	21Ah and above
Display	LCD Screen
Dimensions	260x220x270
Weight	7.5kg

Product Code	Measured Voltage	Max. Discharge Current
BT10004	12	420A (160A Constant)
BT10005	24	100A
BT10006	48	100A

Impedance Tester

Valen RE856

When a complete system shutdown is not an option, the Valen RE856 Battery Impedance Meter will test a range of batteries without the need to disconnect them. The Valen RE856 is the ideal solution for regular battery maintenance inspections required in many industries including high voltage systems, UPS, telecommunications and emergency back-up applications.

Featuring easily programmable software which can be adapted to suit your battery systems, the Valen RE856 has become the economical battery impedance meter of choice. A built-in comparator stores up to 99 sets of various battery types for testing and analysis. The Valen RE856 has a USB interface and a micro SD card allowing the user to store unlimited readings.



Features

Advanced Software

The advanced software for the Valen RE856 allows the user to edit and send comparator settings, download data to a spreadsheet and obtain comprehensive graphs

Instant Results

Instantaneous battery impedance results from the Valen RE856 saves the user time on site

Flexible

Flexibility of design means the Valen RE856 can test a large range of different voltages and battery technologies

Data Logging

Data logging function of up to 4800 data sets allows the user to monitor the battery condition over time and prevents unplanned battery failure

The Tester Includes:

Hard carry case, DC current clamp, test probes, test clamps, and zero board.

Advanced Accessories

Optional Valen RE856 unique probes and extra clamps allow for flexibility in battery testing (see page 15)



Specifications

Product Code	BT11015
Operating Voltage	±6V to ±60V
Battery Types	Valve Regulated Lead Acid (VRLA), Alkaline, Ni-Cd, Li-Ion and Ni-Mh
Display	LCD Screen
Dimensions	198x94x49
Weight	0.53kg

Impedance Tester

HIOKI 3554

Hioki 3554 allows for fast, reliable, hands-on battery impedance testing without the need to disconnect the system. The Hioki Battery Impedance Tester sets the standard for assessing the deterioration and remaining life of a battery by giving a complete diagnosis via battery resistance testing.

The specially designed pin type lead further improves testing efficiency with an L-shaped tip that allows the user to reach deep into the battery racks for an accurate terminal reading on hard to reach batteries.



Features

Robust Casing

New robust protective casing on the Hioki 3554 delivers a better ergonomic hold, extending durability in the field

Fast Testing

Designed for fast testing of batteries, the Hioki 3554 can measure and save data in as fast as 2 seconds saving time on site

Instant Results

Instantaneous results allow the Hioki 3554 user to diagnose battery degradation by measuring internal resistance and voltage

Various Connections

Variety of connections for flexibility and adapting to the users systems, the Hioki 3554 has optional clamps and probes available (see page 15)

Testing Flexibility

Hioki 3554 has the ability to test a large range of battery voltages and technologies

Data Logging

The data logging function of the Hioki 3554 allows the user to monitor the battery condition over time



Specifications

Product Code	BT11021
Operating Voltage	±6V to ±60V
Battery Types	Valve Regulated Lead Acid (VRLA), Alkaline, Ni-Cd, Li-Ion and Ni-Mh
Display	LCD Screen
Dimensions	199x132x60.6
Weight	0.94kg

Impedance Tester

Tekon 950

Designed to make technicians field service maintenance effortless, the Tekon 950 has multiple advantages over its competition. Being an impedance meter allows the Tekon 950 to produce fast and accurate results. However, these results are effortlessly able to be transmitted to remote data holding locations using a mobile app while onsite. All results are effectively recorded and stored, and there is no risk of lost data. Tekon 950 can offer service teams more efficiency and productiveness onsite saving thousands of dollars in downtime and HR expenses.



Features

- Measures internal resistance on battery systems of up to 400V
- Measures voltages of battery systems of up to 500V
- Measures AC voltage of up to 500V (for UPS)
- Measures battery capacity
- Diagnoses ageing batteries and predicts the life span based on historical data allowing the user to time the battery replacement
- Can store historical battery results in its 8MB memory
- Auto-hold and data storage
- Prints out measurements data in reports
- Transmits measurement data to remote locations (i.e. email, server) using Mobile App



Specifications

Product Code	BT11950
Power Supply	7.2V.5.2Ah Li-ion, 12V/2.5A DC Adaptor
Data Storage	8MB
Communication	Bluetooth Ver2.1 + EDR Class2
Operating Temp./Humidity	0°C to +45°C RH 85% max.
Storage Temp./Humidity	-20°C to +60°C RH 85% max.
Compliant Standards	IEC 61010-1 CAT III 500V Pollution Degree 2, EN61326-1:2013
Display	LCD 4.0 Monographic
Dimensions	240(L) x 198(W) x 109(H)
Weight	1.4kg

Impedance Tester

Tekon 960

Designed to make technicians field service maintenance effortless, the Tekon 960 can handle virtually all high-voltage battery systems.

Being an impedance meter allows the Tekon 960 to produce fast and accurate results that can be effortlessly transmitted to remote data holding locations using a mobile app while onsite.

All results are effectively recorded and stored, and there is no risk of lost data. Tekon 960 can offer service teams more efficiency and productiveness onsite saving thousands of dollars in downtime and HR expenses.



Features

- Measures internal resistance on battery systems of up to 500V
- Measures voltages of battery systems of up to DC1000V
- Measures AC voltage of up to 600V (for UPS)
- Measures ripple voltage, current and temperature
- Diagnoses ageing batteries and predicts the life span based on historical data allowing the user to time the battery replacement
- Can store historical battery results in its 8MB memory
- Auto-hold and data storage
- Prints out measurements data in reports
- Transmits measurement data to remote locations (i.e. email, server) using Mobile App



Specifications

Product Code	BT11960
Power Supply	7.2V.5.2Ah Li-ion, 12V/2.5A DC Adaptor
Data Storage	8MB
Communication	Bluetooth Ver2.1 + EDR Class2
Operating Temp./Humidity	0°C to +45°C RH 85% max.
Storage Temp./Humidity	-20°C to +60°C RH 85% max.
Compliant Standards	IEC 61010-1 CAT III 500V Pollution Degree 2, EN61326-1:2013
Display	1024x600 pixels, 7" TFT with TSP
Dimensions	240(L) x 160(W) x 65(H)
Weight	0.9kg

Impedance Battery Tester Comparison



RE856



Hioki 3554



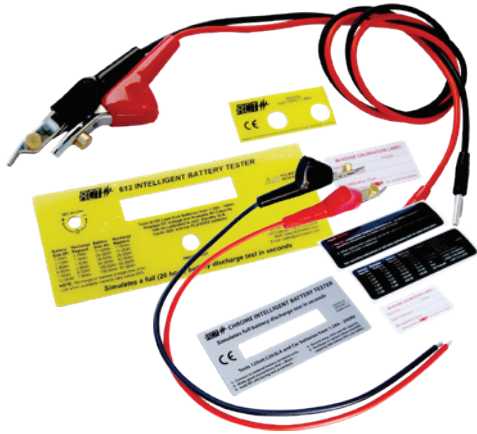
Tekon 950



Tekon 960

Impedance Scale	4mΩ - 400Ω (6 range)	3mΩ - 3Ω (4 range)	3mΩ - 300Ω (6 range)	3mΩ - 300Ω	3mΩ - 3000Ω
Impedance Accuracy	±1.0%	±0.8%	±0.8%	±0.8%	±0.8%
Impedance Max. Test Voltage	60V	60V	200V 400V	200V	500V
DC/V	0 ~ 60V	0 ~ 60V	0 ~ 500V	0 ~ 500V	0 ~ 1000V
AC/V	X	X	0 ~ 500V	0 ~ 500V	0 ~ 1000V
Ripple Voltage	X	X	0 ~ 5V	0 ~ 5V	0 ~ 5V
DC/A	600A	X	4A/40A/400A	4A/40A/400A/1000A	4A/40A/400A/1000A
AC/A	X	X	4A/40A/400A	4A/40A/400A/1000A	4A/40A/400A/1000A
Humidity	X	X	X	O	O
Temperature	NTC (external)	NTC (external)	NTX	O	O
Analyser Trend	X	X	O	O	O
Analyser Change Time	X	X	O	O	O
Data Record	4GB (999)	4,800 Data	8MB (100,000)	8MB (100,000)	8MB (100,000)
PC Interface	USB	Bluetooth	Bluetooth	Bluetooth, USB	Bluetooth, USB
External Interface	X	Mobile App	Mobile App	Mobile App	Mobile App
Auto-hold	X	X	O	O	O
Auto-record	X	O	O	O	O
LCD Display	Static LCD	3.5" Static	3.8" Graphic	7" TFT with TSP	7" TFT with TSP
Battery	1.5V AAx6	1.5V AAx6	Li-ion 7.4V/5.4Ah	Li-ion 7.4V/5.4Ah	Li-ion 7.4V/5.4Ah
Battery Life Time	5.5h		8h	8h	8h
Size	198 x 94 x 49	192 x 121 x 55	240 x 198 x 109	240 x 160 x 65	240 x 160 x 65
Weight	530g	790g	1.4kg	0.9kg	0.9kg

IBT Calibration Kits



Using the ACT Meters Intelligent Battery Testers constantly can create some wear and tear. Valen stock the Calibration Kit for a range of ACT Meters. These Calibration Kits are quick and easy to install and involve no internal adjustment of the testers.

Each kit consists of replacement plug-in leads, new front and rear labels and instructions. These Calibration Kits are the ideal maintenance fix for times when your tester may not be giving accurate battery test results.

Product Code	Description
BT19065	ACT Meters IBT Chrome Calibration Kit
B19068	ACT Meters IBT 612 Calibration Kit

IBT Battery Tester Labels



The Intelligent Battery Tester Labels - each roll contains 250 labels with insertions for:

- Temperature
- Volts
- Ah Readings
- User Initials
- Date Tested

Size: 50 x 28mm

Product Code	Description
BT19072	Intelligent Battery Tester (IBT) - Test Result Stickers

IBT Terminal Connectors



Attaching Intelligent Battery Tester clips directly to high resistance steel bolts will produce low, inaccurate Ah readings. These connectors must be used to obtain accurate, consistent Amphere-hour (Ah) readings on recessed battery terminals.

Product Code	Description
BT19071	ACT Meters Terminal Connectors

CCOLT Protective Case



This tough, hard carry case with foam insert cut to the shape of the Constant Current Load Tester (CCOLT). This carry case is ideal for technicians who need to travel with the CCOLT tester to ensure it remains protected and undamaged.

Features include:

- Comes with a carry handle
- Lockable with padlock (padlock not supplied)
- Lightweight - 3kg without a tester
- Watertight, dustproof and crushproof
- Moulded with lightweight resin
- Double throw latches

Product Code	Description	To Suit
BT19003	CCOLT Protective Carry Case	All CCOLT Testers

Valen RE856 Replacement Parts



Using the Valen RE856 Live Circuit Battery Tester constantly out in the field can create some wear and tear on your battery tester leads.

Valen have replacement RE856 leads in stock!

We can supply you replacement probe and clamp leads.

Product Code	Description
BT19057	RE856 Clamp Leads
BT19058	RE856 Probe Leads
BT19543	RE856 Probe Pin Replacement

HIOKI 3554 Replacement Parts



Using the HIOKI 3554 Battery Tester unit constantly in the field can create some wear and tear especially on your tester leads.

Valen have replacement leads in stock and can source a variety of other HIOKI replacement parts.

Product Code	Description
BT19079	HIOKI 3554 Measurement Probe Leads
BT19080	HIOKI 3554 Tester Probe Pin Replacement



The Valen Story

Valen was first founded as Regal Electro in 1999. Over the next few years, it became apparent that there was a growing need in the industry for a battery supplier who knew not only the characteristics of various technologies, but also understood the technical manufacturing procedures to ensure a quality product.

2009 Opened premises in Hallam, VIC to ensure fast service & delivery to clients.

2010 A presence in New Zealand was established.

2015 Successfully completed its first ENLiFEN Energy Storage Optimiser (ESO) prototype which was put proudly on display at the Comms Connect Exhibition in Melbourne.

2017 Rebranding and reinvigorating of the core product range, Power Charge renamed to Valen, meaning 'Power' in Latin.

2018 A Sydney office and logistics centre was opened in April with the view to further improve the level of service offered to clients.

2018 The company name was changed from Regal Electro to Valen! This decision was made to strengthen the brand and recognition within the industrial battery market.

2020 Valen has continued to grow year on year and strengthened our position as an End to End Solution provider for Australia and New Zealand.



Wow Customers through Service

- Our customers want service and we want our employees to go above and beyond for our customers.



Move Fast & Remain Focused to Get Results

- We are serious about results and we must never lose focus on our goals and our sense of urgency to achieve.
- We believe in working hard and putting in extra effort to get things done.



Upbeat Positive Attitude

- If our employees have a positive attitude and constantly strive to give your best effort, eventually we will overcome our immediate problems and find you are ready for greater challenges.
- Positive and negative are directions that lead to different outcomes. We expect our employees to move in the right direction each day.



Challenge the Status Quo

- We are committed to great results and good is the enemy of great. We want our employees to embrace & drive change



Play as a Team

- Working effectively as a team creates momentum, improves morale.
- The difference between success and failure is a great team and we expect our employees to work together as a team.




Wow Customers
through Service


Move Fast &
Remain Focused
to Get Results


Upbeat Positive
Attitude


Challenge the
Status Quo


Play as a Team

Our team is ready to deliver!

- ✓ Making the Promise
- ✓ Delivering the Promise
- ✓ Keeping the score



Complete Solution

Valen are an End-to-End Solution Provider; so we offer you a complete system solution! Being able to offer the complete solution we save you the hassle of having to search for additional suppliers. From design to supply, we are with you every step of the way!



Quality Control

With our in-house quality control team and state of the art facilities, we ensure the delivery of a unique product that meets and goes beyond your expectations.



Innovative Products

At Valen we take pride in being original, so we have an exclusive range of products for our clients. These unique products and innovation ensure you stay at the front of an ever changing market.



Technical Support

Our support doesn't stop once you invest in our products; with our experienced and skilled technical team we assist you even after sale. If you have any questions about your System or Products purchased, our technical team have the answers.



Personalised Training

Our qualified team of experts are readily available to provide world class training to your team. Thus, ensuring you remain up to date with the latest battery technologies, safety and testing.



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