

## Product Information Sheet



# UH36

## Hi Pot Tester

## Summary

### Top model in Hi Pot Testers

The UH36 is a universal Hi Pot Tester that fulfils all safety standards up to 5 000 V AC. It has been closely developed in co-operation with users and is easy to use thanks to its intuitive usage. The UH36 is versatile and can be used on both production lines and assembly lines as well as in workshops and laboratories. The guaranteed future software and hardware platforms in connection with the intelligent interface concept ensure easy adaptation and high flexibility.

<b>Test voltage:</b>	100 – 5 000 V AC, potential free
<b>Test current:</b>	0,1 - 100 mA
<b>Transformer power:</b>	500 VA
<b>Short circuit current:</b>	> 200 mA
<b>Adjustable testing time:</b>	From 1 - 99 s / 1 - 99 min. and infinite
<b>Display:</b>	LED-display, target and true values are displayed permanently.
<b>Fault indication:</b>	Acoustic, optical and via the port
<b>Set of test parameters:</b>	Freely programmable
<b>Ramp function:</b>	Freely programmable
<b>Testing/Burning:</b>	Switchable
<b>Voltage regulation:</b>	Standard
<b>Keyboard lock:</b>	Standard
<b>Special features:</b>	Conductor breakage and contact monitoring, automatic start
<b>Dimensions (W x H x D):</b>	307 x 164 x 273 mm
<b>Ports:</b>	Digital IO for PLC, RS232, CAN, safety circuit and warning lights (EN 50191)

## Features

- **Monitoring the test leads for conductor breakage and monitoring the contact with the test object**  
For highest process safety, so that in the event of a product liability case it can be proved that the test object has been tested.
- **Freely programmable set of test parameters**  
For safe and fast alteration of the test parameters.
- **Ramp function**  
For particularly easy-on-product testing.
- **Automatic start**  
**When the test pistol HTP06C (Patent) is triggered then there is a start signal:**  
**The high voltage is only activated when the electrical contact has been made with the test object.**  
This protects the test object from surge peaks and ensures the correct test time.
- **Voltage regulation**  
For constant test voltage irrespective of any mains voltage fluctuations.
- **Safety circuit with two controlled relays**  
The best safety techniques as required by the EN 50191.
- **Measurement of current and voltage directly on the high voltage side**

- For accurate measurement.
- **Burn out function**  
To recognise faulty positions.
- **Keyboard lock**  
To prevent inadvertent adjustment of the test parameters.
- **Potential free high voltage**  
For maximum safety.
- **Fault indication: acoustic, optical and via the port**  
For reliable detection of defective products.
- **Acoustic signal at the commencement and completion of testing**  
For safe operation and fatigue-free working.
- **Display showing the type of fault**  
For fast narrowing down of the fault.
- **Remote control mode**  
For fully automatic remote control of the test equipment via a PC or PLC.
- **Set up**  
Individual setting of the start options, language, performance of the digital entries and exits, ramp options, options for the contact and conductor breakage monitoring, and much more.
- **Updates available via the port**  
For customers individual requirements via long distance maintenance.

## Ports and connections

- **Control port**  
Digital interface to a PLC terminal, a foot switch or a result or operating panel with signals such as Start, Stop, Pass / Fail and Test in Progress.
- **RS232 / PC port**  
To connect with a PC. All settings are possible using this connection – the desired test values are automatically set by the equipment.  
Further, the port allows a permanent data collection, as well as control of the status information. On the PC side, there is a data management package – DataView or a driver for your own PC applications available.
- **RS232 / ASCII-print out**  
For direct connection to a terminal programme or protocol printer. In contrast to the PC remote control, the results are permanently transferred in ASCII-format. The print out language is adjustable.
- **CAN-Interface**  
To extend the testing system for additional features and further extensions. As many ETL-appliances and CAN components can be connected to each other as required and remote controlled via the port.
- **Safety circuit**  
For implementation of the safety circuit as required by the EN 50191. There are 3 possible switching possibilities in order to comply with standards when testing using test pistols, test enclosures or within a transfer line.
- **Signal light connection**  
To connect a signal light combination, each with a red and a green high visibility beacon as required by the EN 50191.

## Contact with the test object

### ▪ High voltage exits (front)

Contact is through 2 potential free high voltage exits via suitable built-in sockets HVS06C on the front of the equipment.

These exits are 2-pole with socket for plug HVP06C (A Ø 6 mm and I Ø 2 mm). Together with the 2-pole high voltage test pistol HTP06C a definite start signal is generated and conductor breakage monitoring is guaranteed. In an automated environment, for example a test station, an additional contact monitor can be reached. In order to do this the test points must each have 2 contacts.

## Product description

### Top model in Hi Pot Testers

The UH36 is the clear leader in its class and is the most compact of its close competitors with a standing area of approx. 307 x 273 mm and a weight of only 15,8 kg. Robust industrial quality, modern industrial design and a flexible concept allows the universal use in industrial applications, the development laboratory or in technical service centres.

### Intelligently thought-out operating concept – easy handling guaranteed

The large LED-displays are unfailingly readable. The test parameters and results for test voltage, current and test times are displayed simultaneously. The operator has permanently got the current testing status in full view. The test parameters are set to individually assigned buttons and can be individually adjusted. The UH36 has 9 freely programmable test programmes at its disposal to enable different tests and fast or frequently changing testing programmes to be carried out with the minimum of fuss. Through simple 'button pressing' the programmes are set or re-set and programmed – you can't work faster.

Features such as testing or burning and the freely programmable ramp can be connected as easily as everything else. The programmable ramp sends the test voltage up to the target test value in the pre-selected time.

The basic settings such as language, starting conditions, performance of the digital entries and exits, ramp settings, individual keyboard locks, options for the contact – and cable fault monitoring and much more for your particular use with test pistols, test enclosures or PLC can be set using a special menu.

### Valuable extras – already standard with the UH36

Known problems such as surge peaks during contact, residual voltage, keeping the pre-set test time as well as problems with the contact to the test object are all in the past with the UH36. You ensure that the test object does not get damaged during the test and the accuracy of your tests can be proved in a product liability case.

## Examples of usage

- Potential free testing with test pistols
- Testing with fixed connections and two-hand control
- Testing with a safety enclosure (protection against unavoidable contact)
- As a semi- or fully automatic system component within a production line

## Technical specifications

<b>UH36: High voltage test AC to 5 000 V</b>		
<b>Voltage Test</b>	Voltage range:	100 - 5 000 V AC, depending on the type of appliance
	Measurement range:	0 - 5 000 V AC, depending on the type of appliance
	Adjustment range:	100 - 5 000 V AC, depending on the type of appliance
	Resolution:	10 V
	Accuracy:	1 %
	Output frequency:	50 Hz / 60 Hz depending on the mains supply
	Waveform:	Sinus, depending on the mains supply
	Output stability:	Output voltage regulated to +/- 10 V, PI-regulator
	True value display:	LED-display 13 mm, red
Target value display:	LED-display 10 mm, red	
<b>Resistance Test</b>	Output current:	0,1 - 100 mA
	Measurement range:	0 - 120 mA
	Adjustment range:	0,1 - 100 mA
	Resolution:	0,1 mA
	Accuracy:	1 %
	Short circuit current:	> 200 mA / > approx. 1,100 V
	True value display:	LED-display 13 mm, red
	Target value display:	LED-display 10 mm, red
<b>Test time</b>	Adjustment range:	0 - 99 s / 0 - 99 min, infinite
	Resolution:	0,1 s - 1 s / 0,1 min - 1 min
	True value display:	LED-display 13 mm, red
	Target value display:	LED-display 10 mm, red
<b>General output data</b>	Transformer power:	> 500 VA
<b>Special features</b>	Ramp up function:	The voltage is gradually driven up to the required test voltage, the test time then starts, freely programmable.
	Contact monitoring:	Monitoring of the contact to the test object via contact device (4-pole).
	Conductor breakage monitoring:	Monitoring of the test cables for conductor breakage.
	Burn out function:	Burning out of the faulty positions.
	Minimal current monitoring:	Monitoring of a pre-set minimal current during the test, in conjunction with ETL DataView.
	Automatic start: Start and stop signal using the test pistol:	The ETL test pistol HTP06C recognises (patent) the correct contact to the test product via a special HW-extension.
	Zero voltage switch:	The UH36 can only be switched on or off in the zero voltage run of the test voltage.

<b>Specifications of the UH36:</b>		
<b>General</b>	Mains connection:	230V, 50 Hz / 60 Hz
	Power input:	Max. 8 A
	Display:	LED-display 13 mm x 10 mm target and true values are permanently displayed.
	Setting of the test parameters:	Manually or fully-automatic via the port
	Programming:	Set of 9 parameters that are freely programmable
	Warning signals:	Acoustic, optical and via the port
	Dimensions (W x H x D):	307 x 164 x 273 mm
	Weight:	Approx. 15,8 kg
	Casing:	Plastic, RAL 7035
	Temperature:	5 - 45 °C
	Accessories:	Instruction manual, power cable, safety circuit plug
	Calibration:	Includes manufacturers certificate of calibration
<b>Ports</b>	Control / digital IO:	Start, Stop, Pass / Fail and Test in Progress
	Remote control port RS232:	To connect to a PC and for direct connection to a terminal programme or a protocol printer
	CAN:	To extend the testing system for additional features and for further extensions
<b>Connections</b>	High voltage exits:	Contact to the test object is via 2 potential free high voltage connectors , that are both 2-pole with plug and socket HVPO6C (A Ø 6 mm and I Ø 2 mm)
	Safety circuit:	To implement the appropriate safety circuit as detailed by EN 50191
	Warning light connection:	To connect a warning light combination as detailed by EN 50191
<b>Starting the test</b>	Start and stop signal via the test pistol:	Through special start automatic and 4-pole technique
	Start and stop signal via port:	Test can be started via PLC or PC-interface
	Start button on equipment:	Test can be started by pressing the button on the front of the equipment
	Start button via external switch:	Test can be started via a digital IO e.g., via a foot button
<b>Set up</b>	Keyboard lock:	Individually configured
	Output option:	Individual configuration of the result output
	Buzzer option:	Individual configuration of the acoustic signals
	LED-display:	Brightness of the display elements
	Start options:	Individual setting of the start mode
	Special features:	Setting of the start automatic, the conductor breakage and contact monitoring
	Language and mode choice for external printer:	English, German, Swedish, Italian, Spanish, Dutch Mode: Print when OK, not OK or always
	Ramp options: Test duration:	Ramp time and type of ramp drop Test duration calibration

## Variations



**Hi Pot Tester  
UH36  
Standard**

**Art.-No.: 200208**

Test voltage: 100 - 5 000 V AC  
Measurement range: 0,1 - 100 mA  
Transformer power: 500 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-1kV**

**Art.-No.: 201038**

Test voltage: 100 - 1 000 V AC  
Measurement range: 0,1 - 100 mA  
Transformer power: 100 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-2,5kV**

**Art.-No.: 201012**

Test voltage: 100 - 2 500 V AC  
Measurement range: 0,1 - 100 mA  
Transformer power: 250 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-3C0,75**

**Art.-No.: 202317**

Test voltage: 100 - 3 000 V AC  
Measurement range: 0,1 - 150 mA  
Transformer power: 750 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-5C2**

**Art.-No.: 202194**

Test voltage: 100 - 5 000 V AC  
Measurement range: 0,1 - 200 mA  
Transformer power: 1 000 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-5C3**

**Art.-No.: 201926**

Test voltage: 100 - 5 000 V AC  
Measurement range: 0,1 - 300 mA  
Transformer power: 1 500 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-6kV**

**Art.-No.: 201634**

Test voltage: 100 - 6 000 V AC  
Measurement range: 0,1 - 100 mA  
Transformer power: 600 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-B5kV**

**Art.-No.: 201788**

Test voltage: 100 - 5 000 V AC  
Measurement range: 0,1 – 2,5 mA  
Current is restricted as detailed by EN 50191



**Hi Pot Tester  
UH36S-12kV**

**Art.-No.: 201852**

Test voltage: 100 - 12 000 V AC  
Measurement range: 0,1 - 50 mA  
Transformer power: 600 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-E12kV**

**Art.-No.: 202187**

Extended version  
Test voltage: 100 - 12 000 V AC  
Measurement range: 0,1 - 50 mA  
Transformer power: 600 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-12C1**

**Art.-No.: 202320**

Test voltage: 100 - 12 000 V AC  
Measurement range: 0,1 - 100 mA  
Transformer power: 1 250 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-16kV**

**Art.-No.: 202219**

Test voltage: 100 - 16 000 V AC  
Measurement range: 0,1 - 25 mA  
Transformer power: 500 VA  
Short circuit current: > 200 mA



**Hi Pot Tester  
UH36S-20kV**

**Art.-No.: 202118**

Test voltage: 100 - 20 000 V AC  
Measurement range: 0,1 - 25 mA  
Transformer power: 500 VA  
Short circuit current: > 100 mA