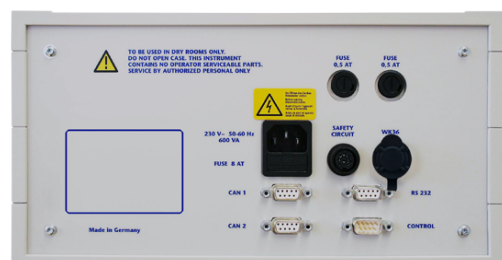




Product sheet

Hi Pot Tester UH36 - 5 kV AC / 100 mA / 500 VA

Product Images





Additional Information

Article number	200208
HV AC - High Voltage Testing	100,0 - 5000 V AC, 0,50 - 100 mA , potential free, ramp, discharge monitoring

Short Description

- Over limit trip and peak detection
- Voltage ramp, key panel interlock, minimum current monitoring
- Remote-controllable (ASCII, Windows DLL, .NET Framework Assembly, DataView)
- Source-sense operation, test pistols with start automatic
- Monitoring of connection and cable failure
- 15 freely programmable sets of parameters
- Signalling: Acoustic, optical and via interface
- Safety circuit including two interlock safety relays

Description

Shut-down over limit detection and peak detection

Insulation fault of the test object can be detected by several criteria. Insulation fault alarm will be triggered by a current over limit exceedance or by a special peak detection in order to detect even low-energy spikes.

Voltage ramp and detection of disruptive discharge voltage

The voltage ramp can be switched on in addition. Parameters like rise time and fall time are freely selectable. The voltage ramp enables safe testing and it is absolutely necessary for testing to norms which require special voltage curves. The voltage at which an isolation fault is detected, will be permanently displayed as a flashing value.

Key panel interlock

The key panel interlock prevents incorrect setting of parameters. It can be set up individually. For example all pushbuttons may be locked. Also desired functions can be left unlocked.

Test device for operating “Stand-Alone” or remotely controlled via interface

The test device can be controlled by a Windows software (user interface software DataView), by a self created custom software application (DLL, C#, .NET, LabView), simple command parameters (ASCII) or digitally with a PLC (Digital-IO).

Automatic start up

The start signal can be triggered by slightly pressing the test pistols to the test object. The test voltage will only be switched-on when the tips of both test pistols are safely connected to the test object. This will prevent the test object from voltage peaks and ensures the correct test time.

Cable break monitoring and connection monitoring to the test object

The high voltage cables are designed for 4-wire technology. Source-sense monitoring ensures maximum process reliability (patent).

Freely programmable sets of parameters

15 freely programmable sets of parameters are available for recalling test parameters.

Signalling: Acoustic, optical and communication interface

Faulty test objects can be reliably identified. Indication lights will also flash additionally.

Safety circuit including two forcibly guided safety relays

The safety technology is designed according to EN 50191.

Measuring of current and voltage directly on the high voltage section

Direct measurement guarantees absolute accurate test results.

Regulated test voltage

Continuously PI-controlled (power integral) test voltage is stabilized regardless of fluctuations in the mains voltage.

High voltage, potential-free

The test voltage is potential-free. This grants highest possible security for the operating person and this is a requirement for performing high voltage tests by using test pistols.

Individual setup

Start options, language, behaviour of digital IO interface, voltage ramp options, options for connection and cable break monitoring, etc.

Updatable via interface

For customer specific adaptations and updates.

High Voltage Tester UH36 5 000 V AC / 100 mA

Specifications, Device Characteristics

Test Voltage:

Range:	100 - 5 000 V AC
Resolution, digit:	10 V
Measurement uncertainty, accuracy:	1 % of measured value +/- 2 digits
Frequency of voltage:	50 Hz / 60 Hz, depending on mains
Wave form:	sinusoidal according to EN 61180, depending on mains
Voltage stability:	regulated output voltage, PI-regulated
Power:	> 500 VA
Zero-voltage switching:	The test voltage is switched on and off at zero crossing.
Ramp function:	freely programmable
Display for actual value:	LED-Display 13 mm, red
Display for desired value:	LED-Display 10 mm, red

Test Current:

Maximum trip current:	0.5 - 100 mA
Resolution, digit:	0.1 mA
Measurement uncertainty:	1 % of measured value +/- 3 digits
Safety current limited:	> 200 mA / > approx. 1 100 V
Burn function:	visualisation of the faulty area (max. burning time 1 s)
Display for actual value:	LED-Display 13 mm, red
Display for desired value:	LED-Display 10 mm, red

Test Time:

Range:	1 s - 99 min, continuous
Ramptime range:	0.5 s - 99 s
Resolution up to 10 s:	0.1 s (Digit)
Resolution > 10 s:	1 s
Measurement uncertainty:	+/- 1 digit
Start of test time:	The test time will only be started if the set test voltage is reached.
Minimum test time:	1 s
Display for actual value:	LED-Display 13 mm, red

Display for desired value:	LED-Display 10 mm, red
General Data:	
Mains supply:	230 V, 50 Hz / 60 Hz
Mains connection:	Schuko-plug
Tolerance mains voltage:	+/- 10 %
Current consumption:	max. 2 A
Fuse:	2 A, T, 5 x 20 mm, 250 V
Displays:	LED, permanent display of actual and desired values
Setting of test parameters:	manually or fully automatic via interface (Windows DLL, ASCII, .net framework assembly, DataView)
Programming:	15 sets of parameters, freely programmable
Error signaling:	acoustic, optical and via interface
Outputs from panel:	2 x high voltage outputs (2-poled socket)
Dimensions (W x H x D):	308 x 168 x 273 mm
Weight:	approx. 15.8 kg
Casing:	synthetic material, RAL 7035
Basic equipment:	manual, mains cable, safety circuit plug
Calibration:	factory-calibration, traceable to national standards, incl. certificate DAkkS-calibration optional available
Environmental Conditions:	
Casing:	IP20
Humidity:	max. 80 %, non condensating
Allowed range of temperature:	+ 5 up to + 40 °C
Max. height above sea level	2 000 m
Cooling:	passive, active cooling optional available
Interfaces:	
Control- / Digital-IO:	start, stop, result GOOD, result BAD and test running
RS232 for remote control:	computer connection for terminal programming and controlling by customer specific software applications, optional usage of a protocol printer
CAN Interface:	for expanding the test system with additional features and further external expansion stages
Additional Functions	
Ramp function:	The voltage ramp time is freely programmable. The test voltage will ramp up to the desired value. Testing starts when this value has been reached.
Fault detection:	switch off on threshold value and by peak detection

Contact monitoring:	<p>permanently monitoring of contact to the test object, requires suitable 4-pole contact</p> <p>German patents: 100 11 466.0 und 100 11 345.1</p> <p>European patents: 01 105 568.8 und 01 105 567.0</p>
Cable break monitoring:	<p>permanently monitoring for lead open circuit and interruption</p> <p>German patents: 100 11 466.0 und 100 11 345.1</p> <p>European patents: 01 105 568.8 und 01 105 567.0</p>
Minimum-current monitoring:	<p>permanently monitoring of the preset minimum current during the test</p>
Automated test start:	<p>The ETL test pistol HTP06C has a special hardware layout for monitoring the contact to the test object.</p> <p>German patents: 100 11 466.0 und 100 11 345.1</p> <p>European patents: 01 105 568.8 und 01 105 567.0</p>

Expanded Device-Setup:

Ramp function:	individual setup
Ramp options:	individual setup for ramp-up time and ramp-down options
Key lock:	individual setup
Signal-configurator:	individual setup for digital result outputs
Buzzer-options:	individual setup for acoustic signals
LED-Display:	individual LED brightness
Start options:	individual setup of start modes
Language and mode selection for external printer:	<p>printout at pass, fail, continuous or switch off</p> <p>Formats: List or CSV</p>

Start Options for Testing:

Start- and stopsignal via test pistol:	<p>Special 4-wire-technology for automated test start and connection monitoring. Test voltage will only start when both test pistols have contact to the test object.</p>
Start via safety circuit:	The test can be started by closing the test cage.
Start button on the device:	The test is started by pressing the button on the front of the device.
Start via serial interface:	start via higher-level control system (PLC or PC)
Start via digital interface:	start via digital IO such as PLC, foot switch, pushbutton, etc. ...
Start options:	individual setup of start modes

Outputs - Test Object, Safety Components:

High-Voltage outputs:	<p>Contact is made via 2 potential-free high-voltage outputs (HV installation sockets HVS06C). The outputs are each 2-pole (A Ø 6 mm, I Ø 2 mm).</p>
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Safety circuit:

Contact monitoring can thus be achieved in an automated environment.

Signal-light connector:

for implementing the appropriate safety circuit in accordance with EN 50191

for connecting a signal light combination with one red and one green rotating beacon in accordance with EN 50191.

Electrical Safety and Norms:

EN 61010-1:

Safety requirements for electrical equipment for measurement, control, and laboratory use

EN 61326-1:

Electrical equipment for measurement, control and laboratory use - EMC requirements

EN 61000-3-3 / EN 61000-3-2:

Electromagnetic compatibility (EMC)

EN 50191:

Erection and operation of electrical test equipment

Contamination level:

2

Protection class:

1

Interfaces

Control interface / Digital IO:

Digital interface for connection to a PLC, footswitch or a remote panel including singalling for START, STOP, GOOD result, BAD result and IN OPERATION.

RS232 / PC-interface:

For connection to the PC. All test parameters can be set by the higher-level control system - the desired test setpoints are set automatically by the device. The interface also allows permanent data acquisition and monitoring of status information. On the PC side, the data management package ETL DataView or drivers (Windows DLL, ASCII, .net framework assembly) are available for your own PC application.

RS232 / ASCII printout:

For direct connection to a terminal programme or a report printer. As an alternative to PC remote control, the tester permanently transmits the results in ASCII format. The language of the printout can be set.

CAN interface:

For expanding the test system for additional features and further expansion stages. Any number of ETL devices and CAN components can be linked and remotely controlled via this interface.

Safety circuit:

For implementing the appropriate safety circuit in accordance with EN 50191. 3 different wiring options are available for standard-compliant testing with test pistols, test cages or within a transfer line.

Signal-light connector:

For connecting a signal light combination with one red and one green rotating beacon in accordance with EN 50191.

Contact details

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Irrtümer und technische Änderungen vorbehalten / Errors and technical modifications excepted.
Frühere Versionen können unter info@etl-prueftechnik.de angefragt werden / Earlier versions can be requested at info@etl-prueftechnik.de.

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