

## Product Information Sheet



# RS36

## Protective Leads Tester

## Summary

### The protective leads tester with the intelligent test probe

The RS36 is an efficient protective leads tester that fulfils all test specifications with a test current of 10 A AC or 25 A AC with an open-circuit voltage of 6 V AC or 12 V AC. It has been developed in close co-operation with users and through its intuitive operation is easy to use. In connection with the test probe VP36C the test person can check the casing pieces without direct visual contact with the tester. The test results are shown on 2 result LEDs above the grips on the test probes.

The RS36 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 current:</b>	10 A AC or 25 A AC
<b>Measurement range:</b>	0 - 500 mΩ / 0 - 200 mΩ
<b>Open-circuit voltage:</b>	6 V AC or 12 V AC
<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>4-lead-measuring-technique:</b>	Standard
<b>Keyboard lock:</b>	Standard
<b>Special features:</b>	Start button and result LEDs, EN 60204 mode
<b>Dimensions (W x H x D):</b>	Approx. 307 x 164 x 272 mm
<b>Ports:</b>	Digital IO for PLC, RS232, CAN

## Features

- **4-lead-measuring-technique with separate source (power) and source path (measurement)**  
This eliminates resistance of the measurement and connection leads of the test object.
- **Freely programmable set of test parameters**  
For safe and fast alteration of the test parameters.
- **Start button on the test probe**  
The turning on of the power source after contact has been made prevents damage to the surface of the test object.
- **Results display in the grip of the test probe**  
To increase comfort when testing, the test person has always got the result status in view without direct visual contact with the tester.
- **Monitoring of the test current**  
To monitor the standard minimum current.
- **Keyboard lock**  
To prevent inadvertent adjustment of the test parameters.
- **Generating the test current from PELV power source**  
For testing without special contact.
- **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 exits, buzzer options 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.

## Contact with the test object

- **4-pole measuring connection (front)**  
Connections for contact to the test object via a suitable lead adapter with e.g. safety plug or alligator clips for test object with open cable ends. Optionally, a second test probe or also an alligator clip can be plugged in to the fixed connection.
- **7-pole measuring connection (front)**  
Connection for contact to the test object via a test probe with a start button and LEDs for the results. Optionally, an alligator clip can be plugged in to the fixed connection.
- **Connections on the back of the equipment**  
Optionally the exits to the test object can be lead out of the back of the equipment.

## Product description

### **Robust protective leads tester with highly practical use**

The RS36 includes, and carries out exactly that which is valuable in daily practice. Exact measuring values, a defined test start to protect the test object and result display provide better operating. The equipment works using the 4-lead-measuring-technique. The voltage drop is measured as close to the test object as possible. Using this process the internal resistance of the equipment and the lead resistance of the test leads is not taken into consideration. The measurement value shown is the actual protective leads resistance of the test object. As well as the normal resistance measurement, the RS36 provides the possibility of testing according to EN 60204. The test criteria for this regulation is the voltage drop via the protective lead – related to a test current of 10 A – drawn upon.

Robust industrial quality, modern industrial design and flexible concept allow 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 for test current, resistance and test time 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 RS36 has 9 freely programmable test programmes at its disposal to enable different tests and fast or frequently changing test programmes to be carried out. Through simple 'button pressing' the programmes are set or re-set and programmed – you can't work faster. The special function EN 60204 can be as easily switched to as the test programmes.

### **Valuable extras – already standard with the RS36**

As the current source is not switched on until contact has been made with the reachable metal parts the surface of the test object is protected. The appropriate start button is to be found on the test probe. An LED on the test probe shows the test results, direct eye contact with the tester is not necessary. The LED is cleared during the test and shows the results at the end of the programmed test time. The RS36 supports the test person through acoustic signals at the commencement and completion of the test. The acoustic signals can be individually selected (e.g. a buzzer signal as long as the measuring values are OK, similar to a continuity test).

## Examples of usage

- Testing with a test probe and a lead adapter
- Testing with 2 test probes
- Testing with a test probe and fixed connections
- As a semi- or automatic system component within a production line

## Technical specifications

<b>RS36: Protective Leads Tester 10 A AC or 25 A AC</b>	
<b>Testing current</b>	Output current RS36A: > 10 A AC Output current RS36B: > 25 A AC Measurement range: 0 - 40 A AC Adjustment range RS36A: 10 A AC Adjustment range RS36B: 10 A AC and 25 A AC Type of current: Alternating current Resolution: 0,1 A Accuracy: 1 % Source of current: PELV True value display: LED-display 13 mm, red Target value display: LED-display 10 mm, red
<b>Resistance</b>	Measurement range: 0 - 600 mΩ Adjustment range RS36A: 1 - 500 mΩ Adjustment range RS36B: 1 - 300 mΩ in 10 A - range 1 - 200 mΩ in 25 A - range Resolution: 10 V Accuracy: 1 % 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>	Test voltage RS36A: 12 V AC Test voltage RS36B: 6 V AC in 10 A - range 12 V AC in 25 A - range
<b>Special features</b>	4-lead-measuring-technique: Testing with separate current and measuring path. Start button in the test probe: Defined switching on of the power source. Results display: Additionally the test results appear in the grip of the test probe. Monitoring the test current: Monitoring of the standard minimum current.

<b>Specifications of the RS36:</b>	
<b>General</b>	Mains connection: 230 V, 50 Hz / 60 Hz Power input: Max. 1,5 A Display: LED-display 13 mm and 10 mm, target and true values are permanently displayed Setting of the test parameters: Manually or fully automatic via the port Programming: 9 sets of test parameters that are freely programmable Fault indication: Acoustic, optical and via the port Dimensions (W x H x D): 307 x 164 x 272 mm Weight RS36A: Approx. 8,5 kg Weight RS36B: Approx. 10,5 kg Casing: Plastic, RAL 7035 Temperature range: 5 - 45 °C Basic equipment: Operating manual, power cable 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>	4-pole measuring connection:	Connection for contact with the test object via a suitable lead adapter.
	7-pole measuring connection:	Connection for contact with the test object via a test probe with start button and result-LEDs.
<b>Starting the test</b>	Start and stop signal through the test probe:	Via start button.
	Start and stop signal via the port:	Start of the test via PLC or via PC-Interface.
	Start button on equipment:	Start of the test via button on the front of the equipment.
	Start button via external switch:	Start of the test via a digital IO, e.g. foot switch.
<b>Set up</b>	Keyboard lock:	Individually configured
	Output-Options:	Individual configuration of the result output.
	Buzzer-Options:	Individual configuration of the acoustic signals.
	LED-display:	Brightness of the display elements.
	Start options:	Individual connection of the input signals.
	Languages:	English, German, Swedish, Italian, Spanish, Dutch / Mode: Print out when OK, not OK or always
	Ramp up options:	Ramp up time and type of ramp drop.

## Variations



**Protective Leads Tester  
RS36A  
Standard**

**Art.-No.: 200218**

Test current: 10 A AC  
Measurement range: 1 – 500 mΩ  
Max. open-circuit voltage: 12 V AC



**Protective Leads Tester  
RS36B**

**Art.-No.: 200676**

Test current: 10 A AC or 25 A AC  
Measurement range: 1 – 500 mΩ or 1 - 200 mΩ  
Max. open-circuit voltage: 6 V AC or 12 V AC



**Protective Leads Tester  
RS36B-40**

**Art.-No.: 202344**

Test current:  
Measurement range:  
Max. open-circuit voltage:



**Protective Leads Tester  
RS36B-50**

**Art.-No.: 202335**

Test current:  
Measurement range:  
Max. open-circuit voltage: