

# RS36B-40

## Ground Bond Tester

40 A AC, 500 mOhm

### Product Information Sheet



## Short summary - overview

Item number	202344
Test current	10 - 40 A AC
Test resistance, limit	1 - 500 mΩ
Open circuit voltage	< 12 V
Testing time	1 s - 99 min, continuous
Type of measurement	4-wire measurement
Operation	Testprobe including start button and result LED



## Functions and range of application

- 4-wire measurement
- Key panel interlock
- Minimum current monitoring
- Remote-controllable (DLL, ASCII, LabVIEW, C#, DataView, Digital-IO)
- Easy test start with testprobe and built in start button
- 15 programmable sets of parameters
- Signalling: Acoustic, optical and via interface

### Universal usage

- Individual test device
- In semi-automatic test stations
- In all-automatic test stations
- 19" rack version available

### Remote-controllable

- Control interface (RS232) for remote control by PC (DLL, ASCII, LabVIEW, C# or GUI software DataView)
- Digital interface for remote control by PLC (Start, Stopp, In Operation, Failed, Passed)

### Usage

- Testing with Schuko-plug and test probes for housing contact
- Testing with fixed cables
- Testing with 2 test probes
- Semi- or fully- automatic testing on a production line.

## Device views

### Front side



- LED – display elements
- Display of preset and actual values: Current, resistance, test time
- Pushbuttons for setting-up test parameters
- Function selection buttons
- Signalling: danger, test running, test fail, type of fault

### Rear view



### Interfaces and connections

- Control interface / Digital IO
- RS232 Interface
- ETL CAN bus for controlling peripheral equipment (Relay matrix, etc... )
- Fuses, Main voltage

## Detailed functional description

### 4-wire measurement technology with separate source (current) and sense path (measurement)

The resistance of the test leads to the device under test is not measured.

### Test probe with start button

The current source is only switched on after contacting the device under test and prevents damage to the surface of the device under test.

### Result display in the test probe

For better test comfort, the test person always has the result status in the field of view without direct visual contact with the test device.

### Test current monitoring

Drops the test current value under the lower limit current value the device immediately puts out an error due to the constant current monitoring.

### 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 (LabView, DLL, C#), simple command parameters (ASCII) or digitally with a PLC (Digital-IO).

### **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.

### **Individual setup**

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

### **Update via interface**

For customer specific adaptations and updates.

## **Interfaces**

### **Control interface / Digital-IO**

Digital interface for connection to a PLC, footswitch or a remote panel including signalling of start, stop, good result, bad result, faulty test object and in operation.

### **RS232 / PC-interface**

For Computer connection. All parameters are selectable in a major control program. The defined test values will be automatically adjusted by the test device. The RS232 interface also allows permanent data logging and controlling of status information.

PC-software options are: The data management software DataView or drivers (DLL, ASCII, LabVIEW, C#) for your own application.

### **RS232 / ASCII printout**

Direct connection for a terminal program or to a protocol printer. Results are sent by the device in ASCII format and can be read from the interface alternatively to the other software options. The output language is adjustable.

### **CAN-Interface**

Expansion of the test system by add-on features and by further extensions. Any number of ETL test devices and CAN-components may be attached to this interface in a row and can be remotely controlled.

## Specifications, device characteristics

### Test current

Setup range	10 - 40 A AC
Resolution, Digit	0,1 A
Measurement inaccuracy, precision	1 % of measurement value +/- 2 Digits
Waveform	Sinusoidal, depending on the supply net
Display for actual value	LED-Display 13 mm, red
Display for desired value	LED-Display 10 mm, red

### Resistance

Setting range, threshold value	1 - 500 mΩ (0 - 20 A), 1 - 200 mΩ (> 20 A - 40 A)
Resolution / Digit	1 mΩ
Measurement inaccuracy, precision	1 % of measurement value +/- 2 Digits
Display for actual value	LED-Display 13 mm, red
Display for desired value	LED-Display 10 mm, red

### Testing time

Setting range, testing time	1 s - 99 min, continuous
Setting range, ramp time	0,5 s - 99 s
Resolution up to 10 s	0,1 s (Digit)
Resolution display > 10 s	1 s
Measurement inaccuracy, precision	+/- 1 Digit
Start testing time	The test time does not start before the set test current has been reached.
Minimum testing 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. 8 A
Fuse	8 A, T, 5 x 20 mm, 250 V
Displays	LED, permanently shown actual and desired values
Setting of test parameters	manually or all-automatic via interface (ASCII, DLL, LabVIEW, C#, DataView)
Programming	15 sets of parameters, freely programmable
Signalling	acoustic, optical and over interface
Ausgänge an der Gerätefront	2 x sockets for DUT contacting, optional on back side
Dimensions (W x H x D)	585 x 212 x 325 mm
Weight	appr. 25 kg
Casing	synthetic material, RAL 7035
Basic equipment	manual, mains cable, safety circuit plug
Calibration	incl. certificate of factory-calibration traceable to national standards, DAkkS-calibration according to DIN EN ISO/IEC 17025 optional available

## Environmental conditions

Casing	IP20
Humidity	max. 80 %, non condensing
Allowed range of temperature	+ 5 to + 40 °C
Max. height above sea level	2 000 m
Cooling	passive, active cooling optional available

## Interfaces

Control- / Digital-IO	start, stop, GOOD / BAD result, 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 by additional devices

## Expanded device-Setup

Locking of pushbuttons	individual setup
Signal-configurator	individual setup for digital result outputs
Buzzer-options	individual setup of acoustic signals
LED-display	individual LED brightness
Start options	individual setup of start modes
Language and mode selection for external printer	printout at pass, fail, continuous or switch off Formats: List or CSV

## Options for test start

Start through test probe signal	Test starts by pressing the start button included in the test probe
Automatic start via safety circuit	The test can be started with the closing of the testing cage.
Start button on the device	front panel button for test-start
Start by serial interface	triggered by a PLC or a PC
Start by digital interface	Digital I/O for example by a footswitch, PLC or a push button
Start options	individual setup of start modes

## Outputs – DUT, security components

Socket for DUT housing contact	7-pole socket: For contacting the DUT with a test probe with built in start button and result LED. Optional contacting with a clamp possible.
Socket for DUT mains	4-pole socket: For contacting the DUT with a suitable adapter with schuko-plug or clamps. Optional use of a second test probe possible.

## Electrical safety and norms

EN 61010-1	safety regulations for electrical measurement, control- and lab- equipment
EN 61326-1	electrical measurement, control- and lab- equipment – EMC-requirements
EN 61000-3-3/EN 61000-3-2	Electromagnetic compatibility (EMC)
EN 50191	erection and operation of electrical test equipment
EN 60598-1	luminaire / Part 1: General requirements and tests
Contamination level	2

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