

## Product Information Sheet



# RD28C

## Protective Leads Tester

## Summary

### **RD28C – makes it possible to test protective leads resistance and insulation resistance simultaneously**

The safety tester is ideal for industrial use, in laboratories as well as workshops. The test can be carried out either manually or with a PLC. As well as via the display on the front of the equipment the results are delivered via potential free contacts. Contact with the test object can be made parallel via two special connections. Firstly via the practical adapter LTA28 for connecting the mains plug and secondly via the test probe VP28 for contact with the casing.

#### **Protective leads resistance:**

<b>Test current:</b>	10 A AC or 25 A AC
<b>Measurement range:</b>	0,01 - 0,3 $\Omega$
<b>Open-circuit voltage:</b>	6 V for 10 A or 12 V for 25 A

#### **Insulation resistance:**

<b>Test voltage:</b>	500 V DC
<b>Measurement range:</b>	0,5 M $\Omega$ - 50 M $\Omega$
<b>Output current:</b>	< 5 mA, current restricted

#### **General:**

<b>Fault indication:</b>	Optical and via the port
<b>Special features:</b>	Simultaneous testing of both values
<b>Display:</b>	Analogue display
<b>Dimensions (W x H x D):</b>	Approx. 585 x 212 x 325 mm
<b>Ports:</b>	Digital IO for PLC

## 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.
- **Generating the test current from PELV power source**  
For testing without special contact.
- **Fault indication: Optical and via the port**  
For reliable detection of defective products.
- **Set up**  
Individual setting of the limit values for the protective leads and insulation resistance.
- **Start button on the test probe VP28T (optional)**  
The turning on of the power source after contact has been made prevents damage to the surface of the test object.

## Ports and connections

- **Control port**  
Digital interface to connect to a PLC (potential free signal exit for Pass / Fail).
- **Analogue exits for insulation and protective leads resistance (optional)**  
To tap the test and result parameters.

## 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.
- **4-pole measuring connection (front)**  
Connection for contact to the test object via a test probe. Optionally, an alligator clip can be plugged in to the fixed connection.
- **12-pole-socket as additional tap of the source and source path (back)**  
Further contact possibilities are available in the 4-lead-measuring-principle.

## Product description

### The combines apparatus for insulation resistance testing and protective leads testing

Being easy-to-use and clearly readable, this piece of apparatus is very well suited to its rough industrial daily use – also for short tact times within automatic systems.

The large analogue displays are clearly readable and reliable. the values for the protective lead resistance and insulation resistance are shown parallel with one another. Both tests are continually carried out when in manual use. There is a red indication light for each type of test. This red indication light is automatically extinguished as soon as the measuring value is in the range of validity after contact has been made with the test object. A green indication light appears as a sign of correct result when both test values are OK. Both limits can be set freely between 0,01 - 0,3  $\Omega$  (PE) and 0,5 M $\Omega$  - 50 M $\Omega$  (ISO).

One way of making contact to the test object is through the practical adapter LTA28 that is used to connect with a mains plug. All customer and country specific contacts can be realised via this connection. with the second connection the choice can be made between the test probe VP28 or a cable with alligator clips for a fixed connection to the casing.

### Desk top apparatus or 19 inch build-in apparatus

The RD28C is made in two different mechanical forms:

- As standard table top variation  
Is available in rugged metal case with practical handles on the sides, can also be ordered with installation handle or carrying handle.
- As 19 inch build-in apparatus (RD28CS-R)

## Examples of usage

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

## Technical specifications

<b>RD28C: Protective Leads Test AC, 10 A or 25 A</b>		
<b>Testing current</b>	Output current:	> 10 A AC in 0 - 300 mΩ range > 25 A AC in 0 - 200 mΩ range
	Adjustment range:	10 A AC and 25 A AC, internally re-connectable
	Type of current:	Alternating current
	Source of current:	PELV
<b>Resistance</b>	Measurement range:	0 - 300 mΩ
	Adjustment range:	1 - 300 mΩ
	Resolution:	10 mΩ
	Accuracy:	2,5 %
<b>General output data</b>	Test voltage:	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

<b>RD28C: Insulation Resistance Test DC, 500 V</b>		
<b>Test voltage</b>	Output voltage:	500 V DC
	Type of voltage:	Direct voltage
<b>Resistance</b>	Measurement range:	0,5 MΩ - 50 MΩ
	Adjustment range:	0,5 MΩ - 50 MΩ
	Resolution:	Logarithmic from 0,1 MΩ - 50 MΩ
	Accuracy:	2,5 %
<b>General output data</b>	Test current:	Current restricted < 5 mA

<b>Specifications of the RD28C:</b>		
<b>General</b>	Mains connection:	230 V, 50 Hz / 60 Hz
	Power input:	Max. 1,5 A
	Display:	Analogue display 50 mm x 100 mm, true values are permanently displayed
	Setting of the test parameters:	Manually
	Fault indication:	Optical and via the port
	Dimensions (W x H x D):	Approx. 585 x 212 x 325 mm
	Weight:	Approx. 12 kg
	Casing:	Aluminium, 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:
<b>Connections</b>	4-pole measuring connection:	Connection for contact with the test object via a suitable lead adapter.

	4-pole measuring connection:	Connection for contact with the test object via a test probe (optionally with a start button and result-LED) or via a cable with alligator clips or similar.
	12-pole-socket:	Additional tap of the source and source path on the back of the equipment for a 12-pole-socket, Contact in 4-lead-measuring-principle

## Varianten



### Safety Tester RD28C

Art.-No.: 201544

#### Standard

- PE - Test current: 10 A AC or 25 A AC
- PE - Measurement range: 0,01 - 0,3  $\Omega$
- ISO - Test voltage: 500 V DC
- ISO - Measurement range: 0,5 - 50 M $\Omega$