



## TEST EQUIPMENT RENTAL SERVICES

When you rent Test Equipment from TDC, we want you to know that you will have a dedicated personal service from start to finish. Our Customer Service team is here to support you throughout your rental period.

TDC are independent specialists promoting all high quality manufacturers and instrument types. Equipment can be delivered Next Day or Same Day to suit your requirements.

When you are finished, simply contact us to arrange your equipment collection or alternatively you can despatch it back to us – we make it easy.

## RENTING FROM TDC JUST MAKES SENSE

By using TDC Test Equipment Rental Solutions, you benefit from our extensive rental inventory that is second to none. We constantly refresh our equipment range with branded equipment manufacturers such as Megger, FLUKE, Chauvin Arnoux, OMICRON, FLIR, b2 HVA, Agilent Technologies, Dranetz BMI, Fujikura, JDSU, Ametek Jofra, GE DRUCK, RAE Systems, TSI Airflow, Rohde & Schwarz, NORBAR, PANAMETRICS, Tektronix and many more.

You can utilise our rental equipment to suit your own requirements, from one week to as many months as you need. You only pay for what you use down to the day. Renting with TDC is straightforward and easy. Our expert Sales and Applications Engineers will find the best solution to suit your application.

Delivery & Collection is arranged by us - we make it hassle free and easy.

## TDC 6 POINT RENTAL GUARANTEE - OUR REPUTATION MATTERS



### 1 SAME DAY DISPATCH

Many of our customers operate to very strict deadlines. Providing the order is placed and confirmed before 3pm, your equipment will be despatched the same day.



### 2 QUALITY

All Equipment is checked prior to dispatch to ensure it is servicable and in safe working order. Certification checks are standard.



### 3 SUPPORT

We will provide you with enough information to make an informed choice of the correct equipment required for your application.



### 4 PRICE

We offer a simple price match promise. We'll match any genuine competitor quote.



### 5 CUSTOMER SERVICE

We can promise that throughout your rental period, we will do our utmost to provide you with the best customer service. All information we provide is in good faith and free of charge. We will provide a quote for any consultancy or professional advice that may be required.



### 6 REPUTATION

We know we are only as good as our last job. We don't just want regular customers - we want to build loyal customers.



For all enquiries, please contact: Gordon Thow (Test Equipment Rental Manager)

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**TEST EQUIPMENT RENTAL SERVICES**

**OCR Checker, type ANU-1  
OCR Test Interface Unit, type ANU-2**

**Datasheet**

# 4 Specifications

## 7 Other Accessories

### OCR checker, type ANU-1

The OCR checker allows easy checking of the long time-delay trip, short time-delay trip, instantaneous trip, ground fault trip functions and the pre-trip alarm function of the OCR in the field.

#### ■ Ratings and specifications

|                   |  |
|-------------------|--|
| Power supply      | <ul style="list-style-type: none"> <li>• AC100–110V, 50/60Hz or AC100–240V, 50/60Hz with type C plug</li> <li>• 4×AA alkaline cells</li> </ul> |
| Power consumption | 7VA  |
| Dimensions        | 101 (W) × 195 (H) × 44 (D) mm  |
| Weight            | 400 g  |



#### ■ Measurement output

- Long time delay trip pickup current
- Long time delay trip pickup time
- Short time delay trip pickup current
- Short time delay trip pickup time
- Instantaneous trip pickup current
- MCR trip pickup current
- Ground fault trip pickup current
- Ground fault trip pickup time
- N-phase protection trip pickup current
- N-phase protection trip pickup time
- Pre-trip alarm pickup current
- Pre-trip alarm pickup time

For the checking of Reverse power protection, use the following OCR test interface unit, ANU-2.

### OCR test interface unit, type ANU-2

OCR test interface unit ANU-2 is a testing tool designed for checking the functionality of type AGR OCR (overcurrent release). Using this tool in conjunction with a commercial constant-current generator allows easy on-site testing of the OCR. The reverse power trip function of the OCR can also be tested using the tool.

OCR test interface unit ANU-2 is a device that converts current into voltage. In addition to the unit, a constant-current generator is needed to test the OCR. Use a generator with a continuous rating of 5A (50/60Hz) and a short-time rating of 50A (50/60 Hz) for 10 seconds (500 VA).



#### ■ Ratings and Specifications

|                    |                    |   |
|--------------------|--------------------|---|
| Power supply       | Input              | External power supply (through power cable with AC adapter) 100 to 240 VAC (50/60 Hz) |
|                    | Output             | 9 VDC   |
| Power consumption  | 7VA                |   |
| Outline dimensions | W160×H90×D220 (mm) |   |
| Mass of main unit  | 2kg                |   |

#### ■ Measurement output

- Long time delay trip pickup current
- Short time delay trip pickup current
- Instantaneous trip pickup current \*1
- Instantaneous trip operation
- MCR trip pickup current \*1
- Ground fault trip pickup current
- N-phase protection trip pickup current
- Pre-trip alarm pickup current \*2
- Reverse power protection trip pickup current \*4
- Long time delay trip pickup time (simplified testing) \*3
- Reverse power protection trip pickup time (simplified testing) \*3 \*4
- Pre-trip alarm pickup time (simplified testing) \*3

#### ■ Accessories

- Power cable with AC adaptor (2m)
- Plug adaptor
- Signal cable (3m)
- Operation manual

\*1 Can be measured only when the input current does not exceed 50 A.

\*2 Not applicable for types AGR-11 or AGR-11B.

\*3 A stopwatch is required for measurement.

\*4 Applicable for types AGR-22BS-PR and AGR-31BS-PR only.



### Usage instruction

Function: Checking the current and time settings for an overcurrent tripping relay

- Long time delay trip      ■ Ground fault trip
- Short time delay trip    ■ Pre-trip alarm
- Instantaneous trip

Applicable models: All models of OCRs for AR type ACBs

- Since an OCR can be powered from the checker, the OCR can be measured even if no control power is applied to the OCR.
- The connection with an OCR can be made easily using a single connector.
- The function, output phase, output voltage, and trip signal for the OCR during the testing are indicated on the LCD and with the LEDs. All the operations can be performed easily using pushbutton switches.

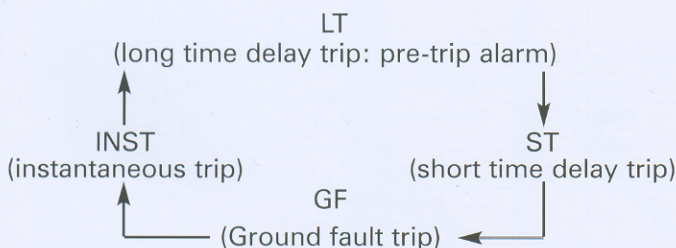
### Function of each switch

The function of each switch is described below: Fig. 1 illustrates the front panel of the checker. The number preceding each switch corresponds to the number indicated in this figure.

#### ① POWER switch

This switch is used to turn ON/OFF the checker. When the built-in battery is active, the switch is automatically turned OFF (auto-OFF function) after it has not been pressed for 1 minute or more.

#### ② SELECT FUNCTION switch



This switch is used to select a measurement mode. Pressing this pushbutton switch toggles in the above order and each measurement mode is indicated both on the LCD screen and corresponding LEDs on the OCR checker. (fig. 1).

If the measurement mode is changed, the output phase is maintained, but the output voltage becomes 0 V.

#### ③ SELECT PHASE switch

This switch is used to select a signal output phase. It is not valid during signal output. Even if the output phase is changed, the directly previous output voltage is maintained. This feature is convenient when the same measurement is performed continuously.

#### ④ and ⑤ SIG. ADJUST UP/DOWN switches

These switches are used to increase/decrease the output voltage value. A rough adjustment can be made by holding down each switch and fine tuning can be performed by pressing each switch. The output value can be adjusted during output.

#### ⑥ OUTPUT switch

This switch is used to turn ON/OFF the voltage output. When a voltage value is output, the voltage value indicated on the LCD changes from a blinking state to an illumination state.

### 4.2 Measurement procedure in the ST mode

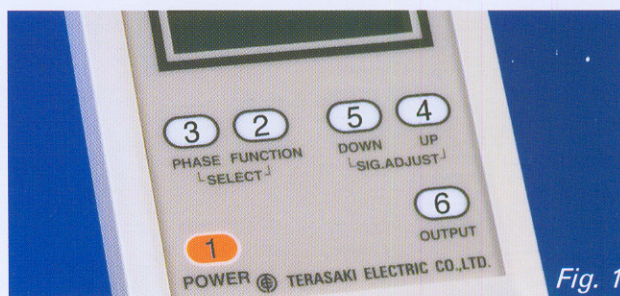


Fig. 1

Note: Picture of whole OCR checker - refer page 51.

The setting value and measurement procedure in the ST mode are given below.

#### Measurement of pickup current setting in the ST mode

- I. Press the SELECT FUNCTION ( ② in Fig.1) and select "ST P.U" on the LCD and with the LED.
- II. Using the SELECT PHASE switch ( ③ in Fig.1) select the phase to be measured.
- III. Press the OUTPUT switch ( ⑥ in Fig. 1) to output the voltage.
- IV. Press the SIG. ADJUST UP ( ④ in Fig.1 ) to increase the voltage until tripping occurs. When tripping occurs, the LED changes from a blinking state to an illumination state and "TRIP" appears on the LCD indicating the voltage value at which tripping has occurred. The output is automatically cut with the trip signal.

#### Measurement of time delay in the ST mode

- I. Press the SELECT FUNCTION switch ( ② in Fig. 1 ) and select "ST T" on the LCD and with the LED.
- II. Using the SELECT PHASE switch ( ③ in Fig. 1 ) select the phase to be measured.
- III. Press the SIG. ADJUST UP/DOWN switch ( ④ and ⑤ in Fig. 1) to adjust the output voltage value at 1.2 times the setting value.
- IV. Press the OUTPUT switch ( ⑥ in Fig. 1) to output voltage for tripping. When tripping occurs, the LED changes from a blinking state to an illumination state and "TRIP" appears on the LCD indicating the time delay at which tripping has occurred. The output is automatically cut with the trip signal.





AC/DC Motors & Generators



Electrical Engineering



Mechanical Engineering



Condition Monitoring



Precision Machining



Marine Electronics



Elec & Mech Product Supply



Calibration and Rental Services



Quality Coatings



Transformers



Control Panels



Compressors



Auxiliary Power Systems

To differentiate our organisation in order to achieve continuous, sustainable growth, TDC endeavours to fully understand and exceed the expectations of our customers, and to work proactively to deliver **Engineering Excellence.**



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