

A 1422 Active 3-phase Adapter



- EN 60974-4
- VDE 0544-4

Tester for Welding Equipment



The A 1422 Multifunctional test adapter has all functionalities as its predecessor A 1322 plus complete support for testing of Arc Welding Equipment. This makes it a perfect test and troubleshooting instrument for the demanding user.

As its predecessor it has unique functions such as active polarity testing, differential leakage testing and testing of 3-phase RCD's, which makes the A 1422 Active 3-phase Adapter an ideal instrument for advanced applications. The A 1422 adapter is designed for use alongside the MI 3321 MultiservicerXA and the MI 3310/MI 3310A SigmaPAT enabling functional tests to be carried out on machines up to 40 A. Several test socket outlets make this instrument an ideal tester for testing industrial extension leads that may also be RCD protected.

The test results and parameters can be saved into the large built-in memory for further downloading, analysis and the test report printing with the help of the PC SW PAT Link PRO that is provided with both supporting test instruments.

POWERFUL FUNCTIONS FOR FAST AND EFFICIENT PERIODIC TESTING:

	MI 3310/MI 3310A	MI 3321
Earth bond / continuity resistance	✓	✓
Continuity (single / auto)	✗	✓
Insulation resistance	✓	✓
Insulation resistance – s	✓	✓
High voltage test	✗	✓
Loop impedance and prospective fault current	✗	✓
Discharging time	✗	✓
Voltage, frequency, three-phase rotary field	✗	✓
Substitute leakage current	✓	✓
Substitute leakage – s	✓	✓
Differential leakage current	✓	✓
3-phase differential leakage current	✓	✓
Touch leakage current	✓	✓
Polarity test	✓	✓
Active polarity test	✓	✓
3-phase polarity test / 3-phase active polarity test	✓	✓
Clamp current test	✓	✓
P/RCD test	✓	✓
3-phase P/RCD test	✓	✓
Power / functional test	✓	✓
3-phase power / functional test	✓	✓
Continuity test (according to IEC/ EN 60974-4)	✓	✓
Insulation resistance (according to IEC/ EN 60974-4)	✓	✓
Leakage current (according to IEC/ EN 60974-4)	✓	✓
No load voltage (according to IEC/ EN 60974-4)	✓	✓

KEY FEATURES:

- Testing of Open-Circuit Voltage at ARC Welding Units in accordance to EN 60974-4.
- All tests on 3-phase electrical equipment can be carried out including live leakage test, power, polarity, RCD and Active polarity.
- Simple connection to the PAT/MACHINE tester with automatic detection.
- Simple test procedures, identical to single-phase equipment.
- Test sequence for 3-phase tests are automatically set based on entered test codes and input voltages.
- Built-in CEE 3-phase/32 A 5-pin, CEE 3-phase/16 A 5-pin and CEE 1-phase/16 A 3-pin test sockets.
- Instrument comes complete with all accessories necessary for comfortable measurements and is kept in a robust waterproof case.

APPLICATION:

- Testing of single and 3-phase ARC Welding equipment.
- Professional 3-phase portable appliance testing.
- Professional 3-phase machine testing.

STANDARDS APPLIED

Electromagnetic compatibility (EMC):
EN 61326-1
Safety (LVD):
EN 61010-1; EN 61010-031
Functionality:
EN 60974-4; VDE 0544-4; VDE 0404-1;
VDE 0404-2; VDE 0701-0702; EN 60204-1
Ed.5; EN 60439; EN 61439-1; AS / NZS
3760; NEN 3140

Technical specifications

Differential leakage current (230/400 VAC or 120/208 VAC)

Differential leakage current readout

Range	Resolution	Accuracy
0.00 mA ÷ 9.99 mA	0.01 mA	±(5 % of reading + 5 digits)

Power / Functional test (230/400 VAC or 120/208 VAC)

Apparent power readout

Range	Resolution	Accuracy
0.00 kVA ÷ 24.00 kVA	0.01 kVA	±(5 % of reading + 5 digits)

Active power readout

Range	Resolution	Accuracy
0.00 kW ÷ 24.00 kW	0.01 kW	±(5 % of reading + 5 digits)

Reactive power readout

Range	Resolution	Accuracy
0.00 kW ÷ 24.00 kVAr	0.01 kVAr	±(5 % of reading + 5 digits)

Power factor readout

Range	Resolution	Accuracy
0.00 ÷ 1.00	0.01	±(5 % of reading + 5 digits)

3-phase RCD / Test current (10 mA, 15 mA, 30 mA, 100 mA, 300 mA)

Portable RCD trip-out time readout (AC and A type PRCD)

Range	Resolution	Accuracy
0 ms ÷ 300 ms ($\frac{1}{2} \times I_{\Delta N}$, $I_{\Delta N}$)	1 ms	±3 ms
0 ms ÷ 150 ms ($2 \times I_{\Delta N}$)	1 ms	
0 ms ÷ 40 ms ($5 \times I_{\Delta N}$)	1 ms	

Portable RCD trip-out current readout (B type PRCD)

Range	Resolution	Accuracy
0.2 x $I_{\Delta N}$ ÷ 2.2 x $I_{\Delta N}$	0.05 x $I_{\Delta N}$	±0.1 x $I_{\Delta N}$

Continuity of the protective circuit (according to IEC/ EN 60974-4)

Test current set to 10 A

Range	Resolution	Accuracy
0.00 Ω ÷ 1.99 Ω	0.01 Ω	±(5 % of reading + 3 digits)
2.00 Ω ÷ 19.99 Ω	0.01 Ω	±10 %

Test current set to 200 mA

Range	Resolution	Accuracy
0.00 Ω ÷ 1.99 Ω	0.01 Ω	±(5 % of reading + 3 digits)
2.00 Ω ÷ 9.99 Ω	0.01 Ω	±10 %
10.0 Ω ÷ 19.9 Ω	0.1 Ω	

Insulation resistance (supply circuit to protective circuit); (welding circuit to protective circuit); (Insulation resistance supply circuit to welding circuit; (according to IEC/ EN 60974-4)

Insulation LN-PE readout; W-PE readout; LN-W readout:

Range	Resolution	Accuracy
0.000 M Ω ÷ 0.500 M Ω	0.001 M Ω	±(10 % of reading + 5 digits)
0.501 M Ω ÷ 1.999 M Ω	0.001 M Ω	±(5 % of reading + 3 digits)
2.00 M Ω ÷ 19.99 M Ω	0.01 M Ω	
20.0 M Ω ÷ 199.9 M Ω	0.1 M Ω	

Insulation resistance (supply circuit of class II equipment to accessible surfaces) (according to IEC/ EN 60974-4)

Insulation LN-P readout:

Range	Resolution	Accuracy
0.000 M Ω ÷ 0.500 M Ω	0.001 M Ω	±(10 % of reading + 5 digits)
0.501 M Ω ÷ 1.999 M Ω	0.001 M Ω	±(5 % of reading + 3 digits)
2.00 M Ω ÷ 19.99 M Ω	0.01 M Ω	

Welding circuit leakage current; Primary leakage current (according to IEC/ EN 60974-4)

Welding circuit leakage current readout; Primary leakage current readout:

Range	Resolution	Accuracy
0.00 mA ÷ 14.99 mA	0.01 mA	±(5 % of reading + 5 digits)

No load voltage (acc. to IEC/ EN 60974-4)

No load voltage readout: (AC peak or DC peak)

Range	Resolution	Accuracy
0.0 V ÷ 199.9 V	0.1 V	±(5 % of reading + 5 digits)

No load voltage readout: (AC RMS)

Range	Resolution	Accuracy
0.0 V ÷ 139.9 V	0.1 V	±(5 % of reading + 5 digits)

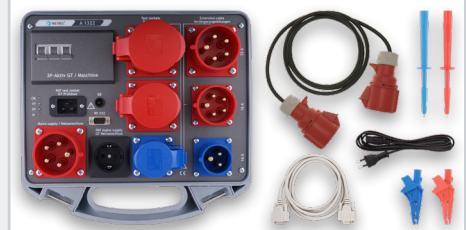
Polarity test Standard test (<60 VAC and DC)

Polarity test Active (Mains supply voltage, over-current protection)

Ordering information:

Standard set

A 1422



- Instrument A 1422
- Bag for accessories
- Test lead, 1.5 m, (blue, red)
- Test probe, (blue, red)
- Measuring / Connection cable between Adapter and Instrument
- 3-phase mains cable 16 A male / 32 A female, 5-pin, 2 m
- RS232 cable
- Instruction manual, short instruction manual
- Calibration certificate

Optional accessories:

Photo	Order No.	Description
	A 1373	3-phase mains cable / adapter 32 A male / 32 A female, 5 pin, 2 m
	A 1375	1-phase mains cable / adapter 32 A / 16 A Schuko, 3 pin, 2 m
	A 1376	3-phase adapter 16 A male / 16 A female, 5 pin, 2 m
	A 1394	1-phase adapter 16 A male / 16 A female, 3-pin, 2 m
	A 1418	1-phase adapter 16 A, 3-pin female / 16 A Schuko male, 2 m
	A 1419	1-phase adapter 16 A, 3-pin male / 16 A Schuko female, 2 m
	A 1423	Adapter for welding equipment, Ø 14/CX20
	A 1424	Adapter for welding equipment, Ø 21/CX22
	A 1425	Adapter for welding equipment, Ø 21/CX25

General data

Supply voltage 1-phase:	230 V ±10 %
Supply voltage 3-phase:	230/400 V ±10 % 120/208 V ±10 %
Maximum test current:	32 A, 40 A max (10 min)
Overvoltage category:	CAT II / 300 V
Protection classification:	1
Pollution degree:	2
Protection degree:	IP 65 (closed and locked cover) IP 20 (connectors)
Case:	Shock proof plastic, portable
Dimensions (w x h x l):	335 x 160 x 335 mm
Weight:	7.2 kg
Operation conditions:	
Working temperature range:	0 °C ÷ 40 °C
Maximum relative humidity:	85 % RH (0 °C ÷ 40 °C)

Note! Photographs in this catalogue may slightly differ from the instruments at the time of delivery. Subject to technical change without notice.



Measuring and Regulation Equipment Manufacturer

METREL d.d.
Ljubljanska 77
SI-1354 Horjul
Tel: + 386 (0)1 75 58 200
Fax: + 386 (0)1 75 49 226
E-mail: metrel@metrel.si
http://www.metrel.si