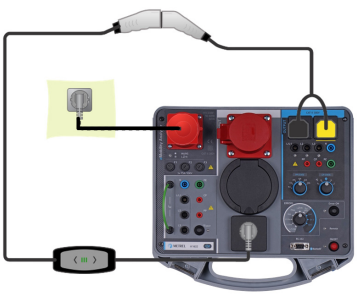
Other instruments / adapters / accessories
A 1632 eMobility Analyser

The A 1632 eMobility Analyser is a special accessory designed for diagnostic testing of Electric Vehicle Supply Equipment (EVSE) together with supported METREL testers. It supports verification of electrical safety and functional testing of Type 1 and/or Type 2 EVSE as well as testing of Mode 2 and Mode 3 electrical vehicle (EV) charging cables and communication monitoring between the charging station and the EV (simulated electric vehicle) during charging. It is also compatible with MESM software for station and cable-based professional reports.

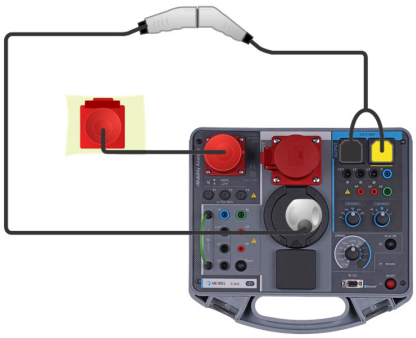
APPLICATION

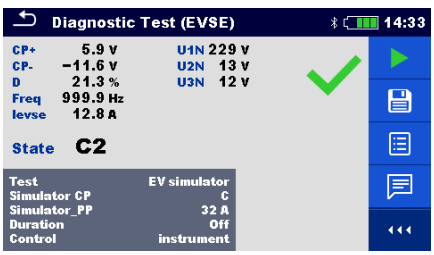
- EVSE functional and diagnostic testing according to EN 61851-1 and electrical safety testing according to EN 60364-6.

- Simulation of faults on mains for verification of Mode 2 electrical vehicle (EV) charging cable safety features.



- Electrical safety testing of 1-phase and 3-phase Mode 2 EV cables
- Electrical safety testing of Mode 3 EV cables.





COMPLETE EVSE TESTING

The combination of A 1632 eMobility Analyser or A 1532 EVSE adapter with Metrel's installation testers the MI 3155 EurotestXD or MI 3152 EurotestXC offers a complete solution for testing in circuits with a **EV RCD** or **EV RCM 6 mA DC trip-out protection**. It is possible to perform a **compete RCD test sequence including the 6 mA DC ramp test** and **loop impedance (Zs rcd) measurement without tripping 6 mA DC EV RCD or EV RCM**. This makes Metrel compliant with standards **IEC 62572** (when Mode 2 EV cables are used) and **EN 62955** (when Mode 3 cables are used).

METREL®

TECHNICAL SPECIFICATION

Measurement functions		Measuring range	Resolution	Accuracy
Nominal system voltage range		100 V AC ... 440 V AC	1 V	±2 % of reading + 2 dig)
Nominal frequency range		0 Hz, 14 Hz ... 500 Hz		
Phase rotation		1.2.3 or 3.2.1		
Voltage UCP+, UCP-		-19.99 V ... 19.99 V	1 V	±(2 % of reading + 2 dig)
Frequency		500 ... 1500 Hz	0.1 Hz	±1 % of reading
Duty cycle		0.1 ... 99.9 %	0.1 %	±10 dig
Ievse		0.0 ... 99.9 A	0.1 A	Calculated value
Toff		0 ... 399 ms	1 ms	±(1 % of reading + 5 dig)
Simulation functions	State	Misc.		
PP simulation	n.c	> 300 kΩ		
	13 A	1.5 kΩ ± 1.5 %		
	20 A	680 Ω ± 1.5 %		
	32 A	220 Ω ± 1.5 %		
	63 A	100 Ω ± 1.5 %		
	80 A	56 Ω ± 1.5 %		
CP simulation	A	> 300 kΩ		
	B	2.74 kΩ ± 1.5 %		
	C	882 Ω ± 1.5 %		
	D	246 Ω ± 1.5 %		
Diag. functions	Error	Misc.		
System state	A1	no EV connected		
	A2	no EV connected / PWM		
	B1	EV connected		
	B2	EV connected / PWM		
	C1	EV charged		
	C2	EV charged / PWM		
	D1	EV charged and ventilation on		
	D2	EV charged and ventilation on / PWM		
	E	Error		
	F	Failure		
	Invalid	CP signal can't be classified		
Error functions	State	Misc.		
Uinput fault	L/L1op	L/L1 conductor open		
	L/L2op	L/L2 conductor open		
	L/L3op	L/L3 conductor open		
	Nop	N conductor open		
	PEop	PE conductor open		
	L<>PE	L/L1 and PE conductors crossed		
	Uext (PE)	External voltage on PE (on input side)		
Uoutput fault	Diode short/Error 1	CP diode shorted		
	CP short/Error 2	CP-PE shorted		
	PE open/Error 3	PE opened		
General				
	Battery power supply	7.2 V DC (4.4 Ah Li-ion)		
	Battery charging time	typically 4 h (deep discharge)		
	Mains power supply	115 V ~ ± 10 % 230 V ~ ± 10 % 230 V / 400 V 3~ ± 10 % 50 Hz - 60 Hz, 60 VA		
	Protection category	300 V CAT II		
	Measuring category	300 V CAT II		
	Degree of protection	IP 65 (case closed) IP 40 (case open) IP 20 (mains test socket)		
	Dimensions (W x H x D)	36 cm x 16 cm x 33 cm		
	Working temperature range	-10 °C ... 50 °C		
	Maximum relative humidity	90 %RH (0 °C ... 40 °C), non-condensing		
	Working nominal altitude	up to 3000 m		
	Bluetooth module	Class 2		

KEY FEATURES

- Functional testing of EVSE via simulation of electrical vehicle's CP and PP circuits
- Diagnostic testing of EVSE via simulation of errors on CP circuit.
- Electrical safety testing of EVSE.
- Functional testing of Mode 2 EV cables via simulation of electrical vehicle's CP and PP circuits.
- Diagnostic testing of Mode 2 EV cables via simulation of errors on CP circuit.
- Simulation of faults on mains for verification of Mode 2 EV charging cable safety features.
- Electrical safety testing of Mode 2 and Mode 3 EV cables.
- Accessible inputs/outputs for connection of safety testers.
- 1-phase and 3-phase Mode 2 cable connections.
- Integrated 4400 mAh Li-Ion battery.
- Bluetooth communication with Metrel safety testers.

SUPPORTED INSTRUMENTS

- MI 3152 EurotestXC
- MI 3152H EurotestXC 2.5kV
- MI 3155 EurotestXD
- MI 3325 MultiServiserXD

STANDARDS

Electromagnetic compatibility
- EN 61326

Safety
- EN 61010-1
- EN 61010-2-030
- EN 61010-031

Functionality
- EN 61851-1
- EN 61557 series
- EN 60364-6

Li – ion battery pack
- IEC 62133

ORDERING INFORMATION

Standard set A 1632
- A 1632 eMobility Analyser
- Type 2 Male plug adapter with long CP pin (2 x Metrel connector), 2 m
- 1-phase EU - 3 phase CEE (16 A) mains cable, 2 m
- 2 mm banana to 4 mm cascade banana adapter, 1 m
- Protective bag for accessories (mounted on the case)
- Metrel eMobility App for Android*
- Instruction manual
- Calibration certificate

*The eMobitliy App can be downloaded free of charge from Android Market.

Note: The Android app eMobility allows only performing functional EVSE tests.

Distributed by:

TransNet Your Partners in Power

TransNet NZ Limited
78 Cryers Road
East Tamaki
Auckland

p: +64 9 274 3340
e: sales@transnet.co.nz
w: www.transnet.co.nz

METREL®