



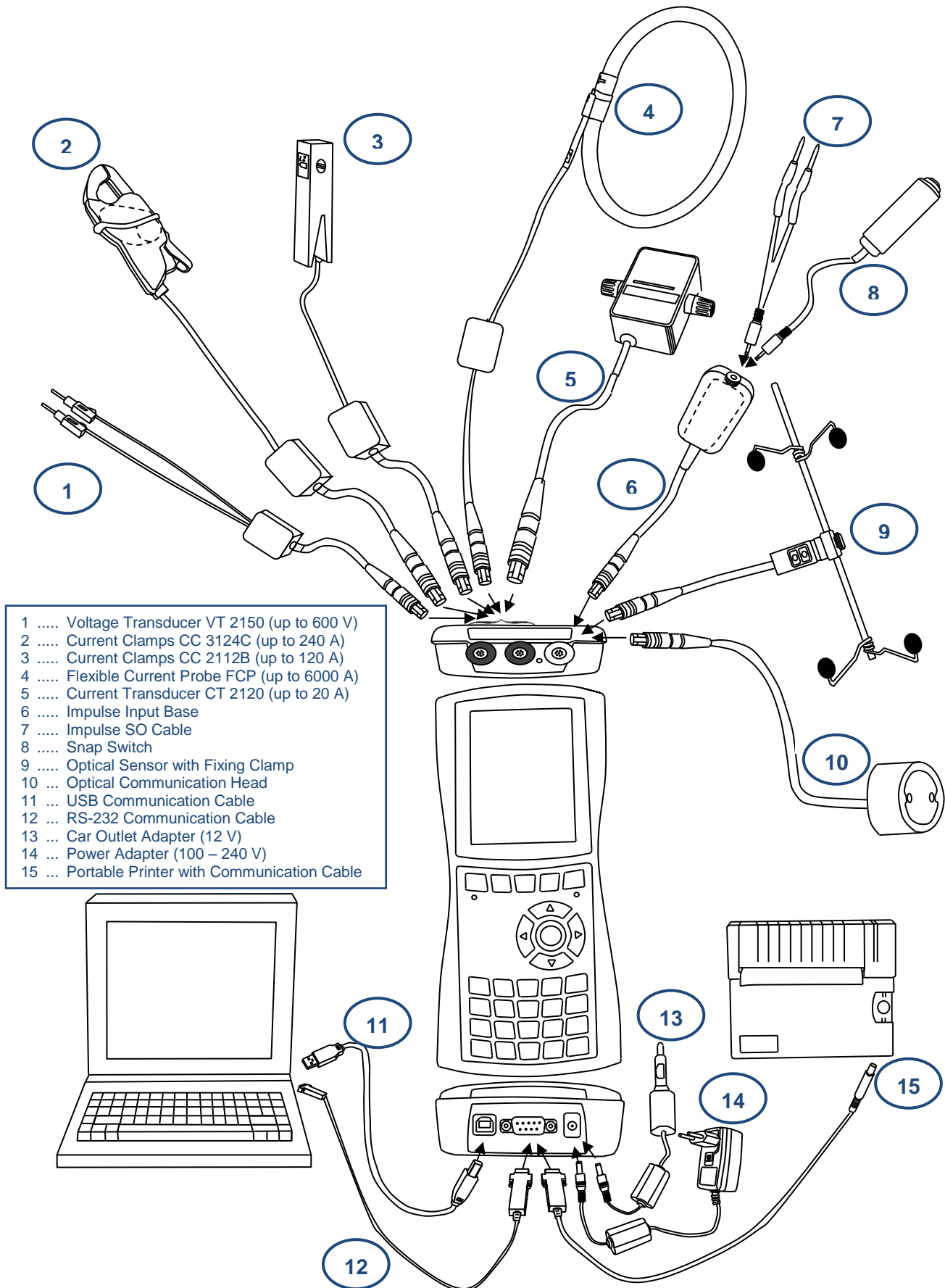
Working Standard

**Model
WS 2120**

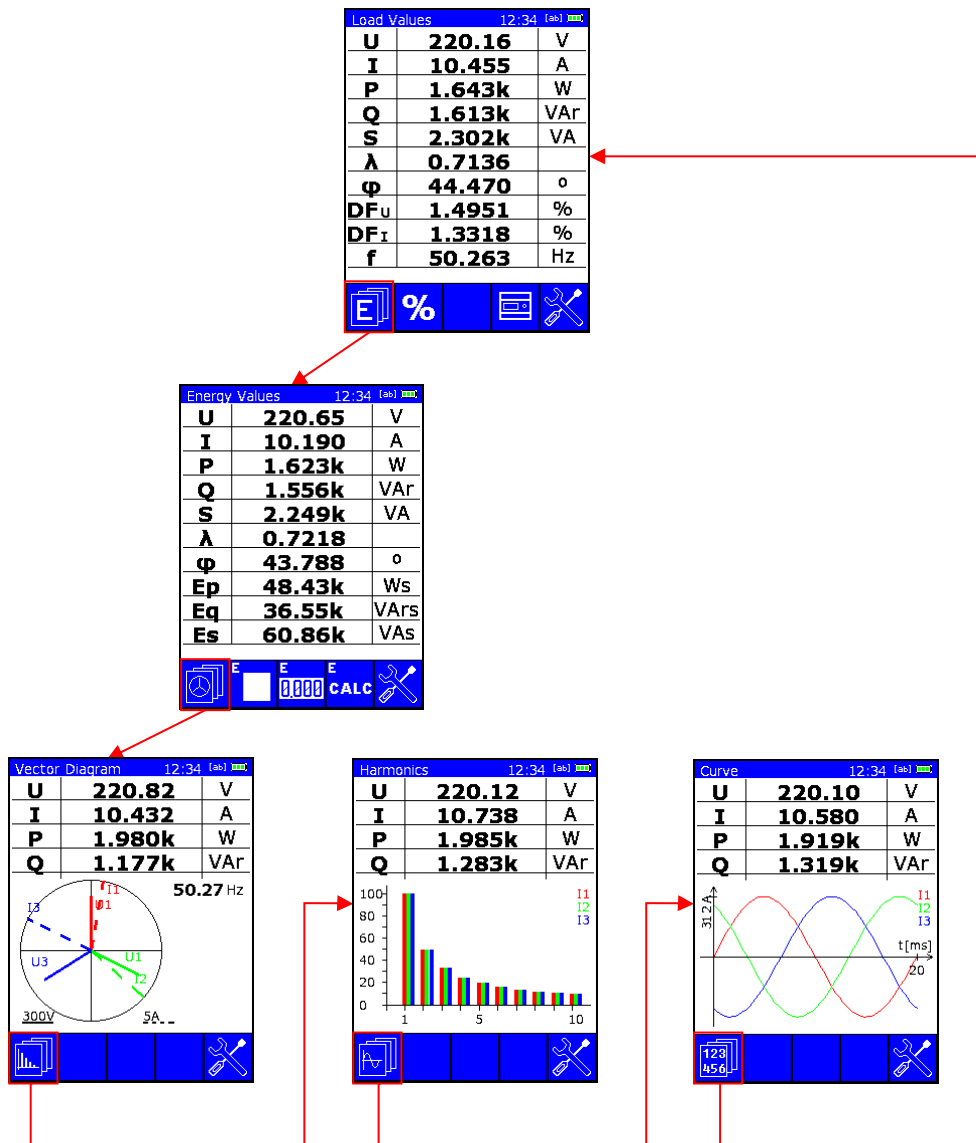
Quick Guide

Version 2.3c

1. Accessories



2. Measurement



MEASURED QUANTITIES:

- U Voltage
- I Current
- P Active Power
- Q Reactive Power
- S Apparent Power
- λ Power Factor
- φ Phase
- DF_U..... Distortion Factor of Voltage
- DF_I..... Distortion Factor of Current
- f Frequency
- E_p Active Energy
- E_q Reactive Energy
- E_s Apparent Energy
- (CT) Current Transformer
- (PT) Voltage Transformer
- ratio, Γ_{B/A} Measured Transmission Ratio
- phase, φ_{B/A} Measured Phase Error

3. Testing



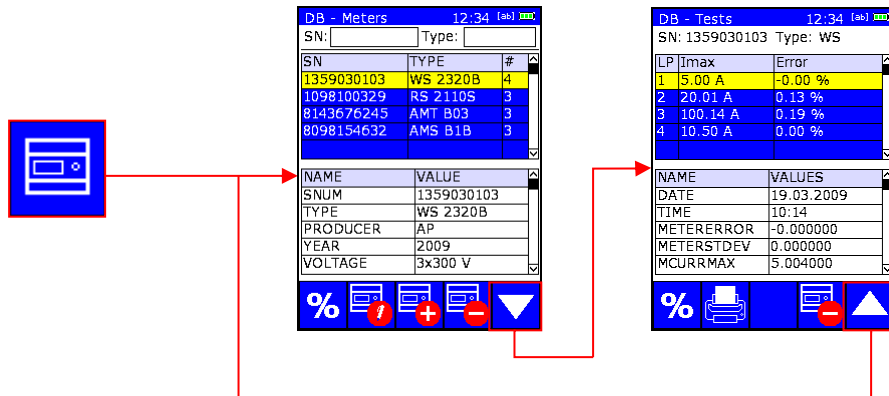
Testing 12:34 [tab] [mm]		
U	220.10	V
I	10.580	A
P	1.919k	W
Q	1.319k	VAr
< 3P4W > < Active > 1000.0000 < /kWh > < LED >		
SN: 1359030103		
0.100 %		
Samples: 0 of 10		
Intergration time: 1 s		
Average: 0.000 %		
Deviation: 0.362030 %		

Testing 12:34 [tab] [mm]		
U	220.65	V
I	10.190	A
P	1.623k	W
Q	1.556k	VAr
< 3P4W > < Active > 1000.0000 < /kWh > < LED >		
SN: 1359030103		
0.036 %		
Samples: 0 of 10		
Intergration time: 1 s		
Average: 0.000 %		
Deviation: 0.414246 %		

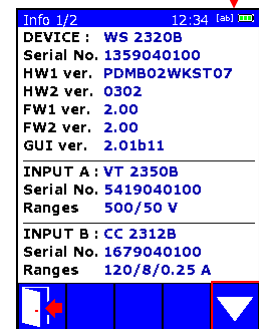
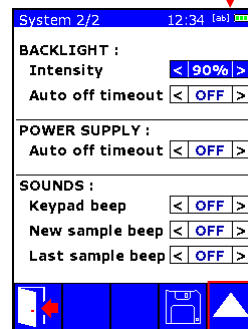
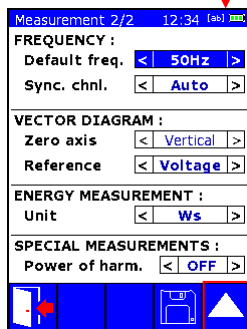
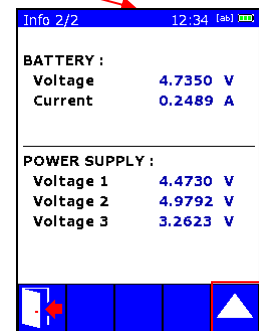
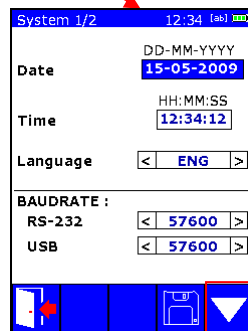
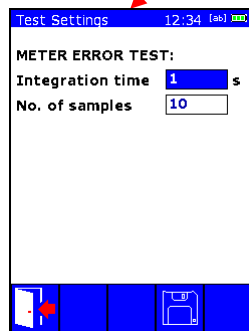
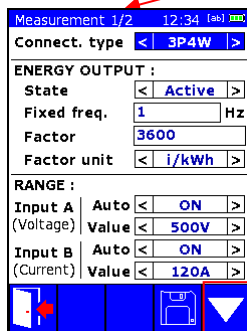
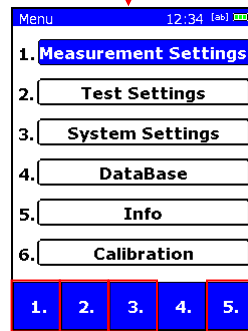
Testing - calibration 12:34 [tab] [mm]		
U	220.62	V
I	10.819	A
P	2.032k	W
Q	1.253k	VAr
< 3P4W > < Active > 1000.0000 < /kWh > < LED >		
SN: 1359030103		
0.903 %		
Samples: 0 of 10		
Intergration time: 1 s		
Average: 0.000 %		
Deviation: 0.763519 %		

Readout 12:34 [tab] [mm]	
/AME5AMK 64E-CRG	
(031109130243)(00)	
(AMT BOB-FA4TR)	
(01010101B10100)	
C.1.0(00004552)	
1.8.0(002400.8*kWh)	
1.8.1(000000.0*kWh)	
1.8.2(002400.8*kWh)	
1.8.3(000000.0*kWh)	
1.8.4(000000.0*kWh)	
0.1.2(01-11-09 00:00:00)	
1.8.0*1(002400.8*kWh)	
1.8.2*1(002400.8*kWh)	
1.8.3*1(000000.0*kWh)	
1.6.0*1(000000.0*kWh)(02-10-09 18:3	

4. Database of Meters and Test Results



5. Menu



6. Measured Data Reading

Step 1 – Installation of Control Software

It is necessary to install to the PC the software supplied in the installation CD. Insert the CD into the CD drive and start the program “install.exe” from the installation CD in case when the installer is not started automatically.

Follow the all installation steps:

- 1 – Installation of InterBase database
- 2 – Installation of WS Control Software
- 3 – Database creation

Step 2 – Interconnection of the Device with PC

Connect the PC to the device through the USB or RS-232 cable.

Step 3 – Communication Parameters Setting

- Start the program ws.exe
- Select menu item *Configuration / Parameters* from the main program window (Fig. 1) for displaying communication parameters settings window (Fig. 2)
- Select correct port to which the device is connected and communication speed same as is set in device

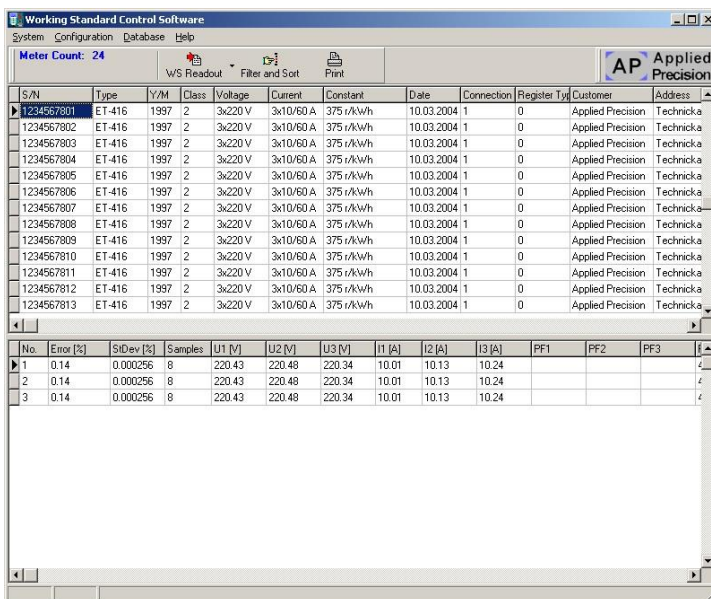


Fig. 1 - Main program window

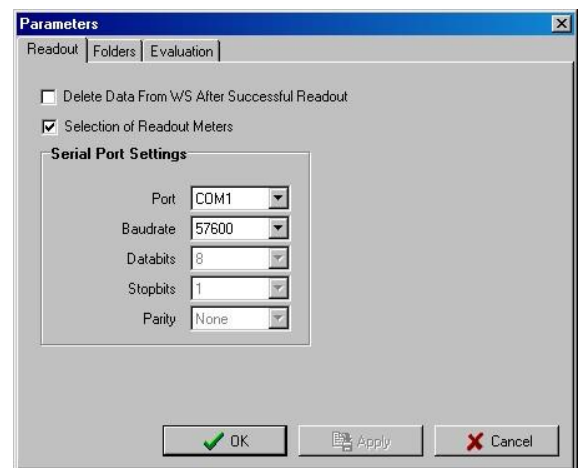


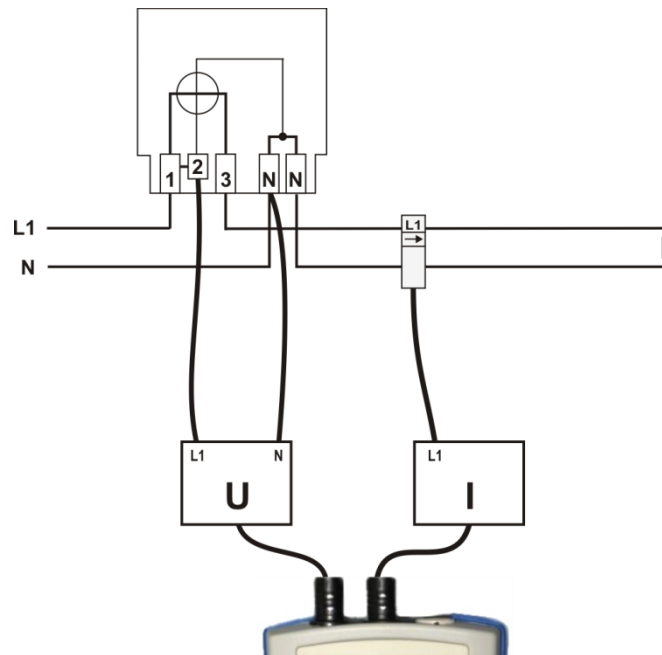
Fig 2 – Communication parameters settings window

Step 4 – Measured Data Reading

Connect the device to the PC and select menu item *System->WS readout* from the main program window (or use *WS Readout* button located under the main menu).

Measured data will be transferred into the database of the PC.

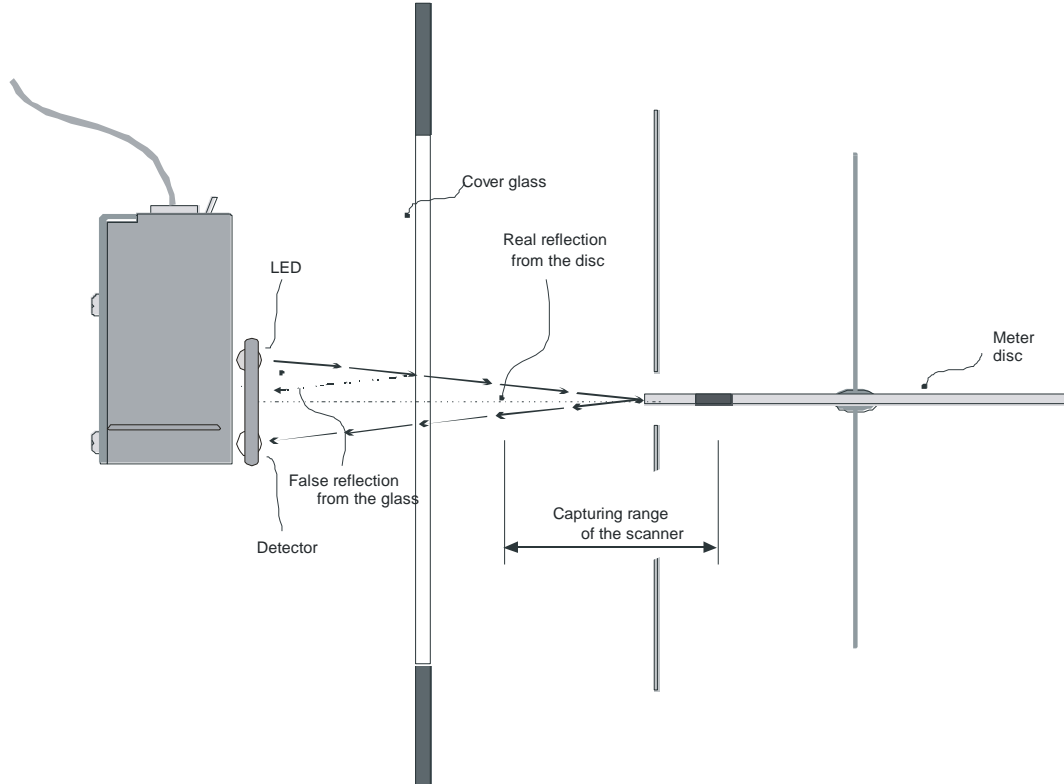
7. Connection Diagram



Single-phase 2-wire (1P2W) connection

8. Optical Scanner Positioning

Positioning on dynamic (disc) meter



Positioning on static (electronic) meter

