

ملحق رقم (5): مواصفات أجهزة التحقق لعدادات الكهرباء
المواصفات الفنية المطلوبة

Reference meter	
Measuring modes	2WA, 2WR, 2WAP, 3WA, 3WR, 3WAP, 4WA, 4WR, 4WAP
Accuracy class for measuring of power / energy	Better than 0.02%
Fundamental frequency	15...70Hz
Power Measurement	
Power/energy measurement accuracy	Better than 0.02%
Temperature drift	$< 1 \times 10E-6 / K$
Standard deviation	$< 2 \times 10E-6$
Long term stability	$< 30 \times 10E-6 / Year$
Voltage	
Test voltage output	3*(100mV-580V) (or customized)
Power of the voltage output	Depend of the meter capacity on test bench (40 meters)
Resolution	Better than 0.01% of the full scale of range
Setting Accuracy	Better than 0.02% at the final range Value
Stability	Better than 0.02%/h (integration time 150s)
Load regulation from 0-max. load	Better than 0.01%
Distortion Factor	Better than 0.03% for linear resistance load
Harmonic	Up to 50 th and free programmable
Current	
Test current output	3*(0.5 mA -160A)
Power of the current output	Depend of the meter capacity on test bench (40 meters)



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Setting Accuracy	Better than 0.02% at the final range Value
Stability	Better than 0.02%/h (integration time 150s)
Load regulation from 0- max. load	Better than 0.01%
Distortion Factor	Better than 0.03% for linear resistance load
Harmonic	Up to 50 th and free programmable
Phase Angle	
Range	0-360
Resolution	0.01
Accuracy	Better than 0.001 deg
Error Display	
Type of error display	Res Led
Resolution of the error Displays	8 Dig
Quantity	
Number of test benches	2 test benches with 20 meter capacity per run for each

متطلبات التشغيل

- Power requirement: Voltage supply (3*220/380V+-10% or customized) (60 Hz+-0.5 Hz)
- Environment: Operation temperature (according IEC (62052- 62053- 62058) & OIML-R46 Standard)
- Environment: Operation Humidity (according to IEC (62052- 62053- 62058) & OIML-R46 Standard)

متطلبات إلحاقية

- Tools trolley 217 tools 7 drawers
- PC that meet the requirement of SASO IT security.
- The result does not show in the report any decision just giving the value and the using the report directly without any modification. Also, the report of the tests should generate for each meter itself". Ex: I have 40 meters and after testing all meters, the report should be for each meter itself.
- A good software that can be automated calibration and testing of electricity meters.
- The Electricity Meter Test Equipment should conform to IEC and OIML R-46
- Training program (testing evaluation, generate the good report, analyze the report,,,,,etc)
- Need other reference Meter "same specifications above"



OIML R-46 IEC (62052- 62053- 62058)

- Accuracy test
 - Load test
 - no load test
 - starting current test
 - dial test
 - maximum demand test
 - Influence quantly related to accuracy tests (Voltage, Frequency, Phase sequence, voltage unbalance)
 - Influence of harmonic Component in voltage and current circuit as per standard
 - Tamper and mounter.
- Note: all Meters should be test both side (importing & exporting energy).
 - Note: Test bench can test all different class of meters and different connection types.