



## CPC 100

Multi-functional primary test system for substation Commissioning and maintenance. The patented test system replaces numerous individual testing devices and offers new, innovative testing methods. This makes testing with the CPC 100 a time-saving and cost-effective alternative for conventional testing methods. Despite its expansive capabilities, the CPC 100 is very simple to use.

Using the CPC 100, electrical tests on various assets can be performed: Universal testing device for electrical diagnostics Electrical tests on transformers, current transformers, voltage transformers, grounding systems, lines and cables, and circuit, breakers can be performed with the CPC 100.



## CMC 365



The CMC 356 is the universal solution for testing all generations and types of protection relays. Its powerful six current sources (three-phase) mode: up to 64 A / 860 VA per channel) with a great dynamic range, make the unit capable of testing even high burden electromechanical relays with very high power demands.

Very powerful current sources for testing high burden electromechanical relay, High current amplitudes for 5 A relay testing, High accuracy and versatility for testing static and numerical relays of all types Integrated network for testing IEC 61850 IEDs Continuous synchronized outputs with CMIRIG -B (e.g. for PMU or MU testing) Primary injection capabilities for commissioning tasks.

This primary current injection testing system is designed to perform primary tests requested in substations commissioning. It allows to perform accurate tests on CTs, VTs, PTs and ground grid.

- Fully automatic
- Primary injection testing capabilities: up to 800 A or up to 5000 A / 7000 A, with the optional module BUX 5000
- Variable output frequency: 15 - 500 Hz
- Power dissipation factor test with the optional module TD 5000 ( voltage up to 12 kV)
- 2000 v AC high-pot test
- Local control by large color display
- PADS - Power Apparatus Diagnostic Software for automatic testing, assessment and report
- IEC 61850-9-2 communication protocol
- Patented technology for Capacitance and Tan Delta measurement
- USB interface and Ethernet interface for PC connection.

## STS 5000



## Secondary Relay Tester **HYJB PC6**

### 6 Phase Relay Tester

This tester with standard 6 phase voltage, 6 phase current output, voltage 125V/phase, current 30A/phase, 6 phases in parallel can up to 180A. Digital Signal Processor Microcomputer. Not only test the traditional relays and protectors, but also test the modern micro computer replays, special for transformer differential protection and transfer equipments.



### CT-PT Analyzer **HYVA-404**

HYVA404 is unique multifunction instrument designed to meet the IEC60044-1, IEC60044-2, IEC60044-6 and C57.13 standards for performing excitation, ratio and phase error, polarity, secondary loop burden and coil resistance on current or voltage transformer. The instrument provides fully automatic testing and calibration for all types of low leakage flux current transformer and inductive voltage transformer. The maximum knee point voltage of sample CT could be reached 8.4kv. The standards support by HYVA404 include IEC60044-1, IEC60044-2, IEC60044-6 and C57.13

### Transformer Turn Ratio Tester (**HYBC-901**)

1. The voltage ratio measurement for three or single phase transformer
2. The group vector measurement for three phase transformer.
3. The polarity measurement for single phase transformer or CT/PT
4. Voltage ratio error calculation
5. Current transformer ratio measurement
6. Excitation current measurement in ratio testing
7. Reproduction the AC test voltage from power source to reduce the effects of bad power source
8. Save the test results in the memory internal the tester
9. Print the test results by micro printer
10. Reverse connection detect unit to prevent the high voltage injected to operator
11. Over current protection unit integrated in software and hardware
12. Upload the test results to PC by RS232 and make word report by software



## Circuit Breaker Analyzer HYGK-306

Closing and opening time measurement of 12 channels. Max difference of closing or opening time measurement of three phases. C-O and O-C time measurement. Rated operation sequence test. Bounce time and frequency measurement of breaker closing. Circuit breaker closing and opening speed measurement. Travel time, Coil current time curve of circuit breaker operation measurement. Travel and clearance of circuit breaker measurement. Variable DC circuit breaker operation power supply. Closing arc resistance value and connected time measurement. Closing time and opening time of graphite circuit breaker measurement. Print test results by internal microprinters.



## Contact Resistance Tester HYHL 100A

### Contact resistance tester application:

HYHL Series contact resistance tester is applied in circuit breaker testing and power cable connection quality inspection. The max test current of contact resistance tester could be reached 600A. All the test results could be saved in tester or printed by microprinter.

### Contact resistance tester technique index:

#### Types:

HYHL-100A 100A Contact resistance tester  
 HYHL-200A 200A/100A for choose  
 HYHL-400A 400A/300A/200A/100A for choose  
 HYHL-600A 600A/400A/300A/200A/100A for choose



## Winding resistance tester HYZC-20A

There are four DC currents to select for HYZC-20 which has a large output power, the power of the tester itself is very little.

Used four lines, it is quick, stable, high precision for testing the winding resistance. In addition, it has a strong ability for anti-jamming, over current, over voltage and discharge. The security is also very high, So it is an ideal tester for testing various resistances especially the sensibility equipment.



## Tan-Delta Tester **SG2008**



SG2008 Automatic 10kV Capacitance and Dissipation Factor Set is design to measure dissipation and capacitance in heavy electromagnetic interference environment such as in power plants or substations. Also it can be used in laboratory for high accurate test such as High Voltage (EHV) class Bushings, Winding of transformer (1/2/3 windings), shunt reactors, Current transformer, Capacitor Voltage transformer (CVT), grading capacitors of Circuit Breakers, Surge Arrester and other electrical equipments. The test set is all-in-one structure: including precision digital bridge, 10kV/200mA frequency conversion power unit, reference capacitor (CN) and other electronic circuits. An external power supply can expand the test range. True portability is realized by the lightweight. Simple usage is realized by the full automation. High Performance is realized by the digital process.

## Voltage Divider **FRC-100**

FCR-100 high Voltage Divider is a universal high Voltage measuring instruments which can Be used to test Power frequency AC high voltage and DC high voltage for electric power Systems, electrical appliance, electronic equipment manufacturing sector. It includes High voltage testing part & low-voltage measuring instruments. The low-voltage & high voltage part can work separately, so it is of safety and reliability. It is the Upgrading products of static high voltage meter, packed with aluminum alloy case for Portable.



## Primary Current Injector **SCITS**



The T&R 200ADM-P is the most recent addition to the range, and provides commissioning and maintenance engineers with a flexible system for testing protective systems. It has an easy to understand panel layout and a simple user interface. The status of every function can be seen at a glance, and there are no complex menus to navigate.

The unit has a range of outputs allowing injection of currents as low as 1mA and as high as 200A. Voltages- up to 240V are available on the main outputs, allowing high impedance current relays and voltage relays to be tested. Four true RMS metering ranges are provided, allowing the full scale of the meter and trip level to be set independently of the selected output-. Industry standard safety connectors are used on all inputs and outputs for convenience, reliability and safety.

## Insulating Oil Tester **HYYJ-502**

HYYJ-502 is developed according to the national standard GB-86 Insulating Oil Dielectric Strength Testing Method. LCD screen can display test procedure and test result. All the human interaction operations complete by the rotating mouse. It is very easy for customers to measure the breakdown voltage of all kinds of oil by HYYJ-502. You can print the test result by the micro printer internal the tester. Of course, you can upload the test data to PC from RS232 for data analyzing. The special circuit design makes the tester has a good performance at stability and anti-noise.



## Dew Point Tester

### **MICHEEL EASIDEW**

The Easidew Portable Hygrometer has been designed to make spot checks of the dew point in air and gases as simple as possible. This completely self-contained instrument weighs only 4kg and is delivered ready to use. Simply connect your sample gas to the Quick Connect fittings, turn on the instrument and it will automatically begin to measure the dew point of the applied sample.



## **Kyoritsu 3125** High Voltage Insulation Tester



Wide range measurements from 500V to 5000V and up to 1000GΩ. Large digital display with Bar Graph indication and back light. Polarization Index measurement (PI). Timer measurement function. Indication of Output voltage and Discharge voltage. Auto-discharge function and Voltage output warning function. Auto power off and Battery Check. Safety standard IEC 61010-1 CAT III 600V



## **Kyoritsu 4105A** Earth Resistance Meter 3 Pole

## Kyoritsu 2000 Digital Multimeter

## **Kyoritsu 2433R** Leakage Clip On Meter



## DC HI POT

70kV



## AC HI POT Test Set

30kV/ 100kV



## Multimeter

Fluke-117



## Partial Discharge Tester for Alternator



**Transformer Oil  
Centrifuging Machine**  
**6 Kilo Ltr/ Hr**



**Transformer  
Vacuum  
Machine**  
**70 Ltr/Sec**



**Loop Calibrator**  
**VICTOR 05**



**Vibration Meter Smart Sensor**



## Tools & Equipment List

<b>Testing Equipment</b>		
Sr. No.	Equipment Name	Numbers
1.	Primary Equipment Tester: CPC 100	1
2.	Secondary Relay Tester 3 Phase	2
3.	Secondary Relay Tester 1 Phase	2
4.	Breaker Timer	2
5.	ISA STS 500	1
6.	Tan-Delta Tester	1
7.	CT Analyzer	1
8.	Transformer Ratio Tester 3 Phase	1
9.	Primary Current Injector	2
10.	DC Hipot 70kV	1
11.	AC Hipot 30kV	1
12.	Voltage Divider: 100kV	1
13.	Contact Resistance Meter: 100A	1
14.	Winding Resistance Meter	1
15.	100kV Oil BDV Tester	2
16.	60kV Oil BDV Tester	1
17.	5kV Insulation Resistance Tester	4
18.	1kV Insulation Resistance Tester	2
19.	Data Logger	2
20.	Thermal Infrared Gun	2
21.	Leakage Clip On Meter	4
22.	Mid-High Range Clip on	8
23.	AVO Meter	22
24.	4 Pole Earth Resistivity Meter	1
25.	3 Pole Earth Resistance Meter	2
<b>Civil Works Related Equipment</b>		
Sr. No.	Equipment Name	Numbers
1)	Labeler SOKKIA-B-20	1 No.
2)	Mixture Machine, 11cft	1 No.
3)	Generator 18kW	3 Nos.
4)	Submergible pump 2kW	1 No.
5)	Vibrator	3 No.
6)	Water pump Electric 1.5 HP	2 Nos.
7)	Dumber	1 No.
8)	Hoist	7 Nos.
9)	Jogs	500 Nos.
10)	Shutters	Ample



11)	Leveling Staff	Ample
12)	Theodolite	Ample
13)	Tool Belt with Suspenders	Ample
14)	Measuring Tape (30')	Ample
15)	Steel Measuring Tape (100')	Ample
16)	Speed Square	Ample
17)	Framing Square	Ample
18)	Carpentry Pencils (lots of them)	Ample
19)	Carpentry Crayons	Ample
20)	Framing Hammer	Ample
21)	Finish Hammer	Ample
22)	Utility Knife	Ample
23)	Retractable Chalk Line	Ample
24)	Linesman Pliers	Ample
25)	Line Level	Ample
26)	Torpedo Level	Ample
27)	Two Foot Level	Ample
28)	Six Foot Level	Ample
29)	Cordless Drill/Driver	Ample
30)	Circular Saw (Worm Drive)	Ample
31)	Cordless Circular Saw	Ample
32)	Plunge Router	Ample
33)	Straight Router	Ample

34)	Jig Saw	Ample
35)	Reciprocating Saw	Ample
36)	Sliding Compound Miter Saw	Ample
37)	Portable Table Saw	Ample
38)	Air Compressor	Ample
39)	Framing Nail Gun	Ample
40)	Block Plane	Ample
41)	Nail Sets	Ample
42)	Clamps, clamps and more clamps (Bar Clamps, C-Clamps, Pipe Clamps)	Ample
43)	Hammer Tacker	Ample
44)	Powder Actuated Nail Set Gun	Ample
45)	Extension Ladders – 12' (3.66m)	Ample
46)	Step Ladders – 10' (3.05m), 8' (2.44m), 6' (1.83m), 4' (1.22m)	Ample
47)	50' (15.24m) 10 gauge Extension Cord	Ample
48)	Numerous 12 gauge Extension Cords	Ample
49)	Shovels	Ample
50)	Pick Axe	Ample
51)	Digging Bar	Ample
<b>Erection Equipment</b>		
Sr. No.	Equipment Name	Numbers
52)	Torque Wrench	12 Sets
53)	Welding Machine	8 Sets
54)	Pipe Wrench	4 Nos.
55)	Hand Crimping Tools	3 Pcs
56)	Hydraulic Lug Punch Machine	2 Pcs

57)	Grinding Machine	4 Nos.
58)	Drill Machine	4 Nos.
59)	Cutting Pliers	48 Pcs
60)	Nose Pliers	52 Pcs
61)	Andy Cutter	60 Pcs
62)	Wire Stripper	56 Pcs
63)	Connector	108 Pcs
64)	Flat Screw Driver	24 Pcs
65)	Star Screw Driver	38 Pcs
66)	Ferrule Printer	3 Pcs
67)	MCB/MCCB For Safe Power Supply	22 Pcs
68)	Tester	33 Pcs
69)	Chain Pulley- 5 Ton	2 Sets
70)	Adjustable Wrench	18 Pcs
71)	Ring Dully	23 Sets
72)	Spanner	13 Sets
73)	Allen Key	19 Sets
74)	Hacksaw Blade/Frame	12 Pcs
75)	6000 L/H Centrifuging Machine	1
76)	Centrifuging Machine: 2000 L/H	1
77)	Vacuum Machine	2
78)	Pallet Truck 5 Ton	2
<b>Automation Department Tools</b>		
Sr. No.		
79)	PLC Training Module	1
80)	Loop Calibrator	2
81)	Lux Sensor	Ample
82)	Energy Audit Kit	Ample
83)	Data Logger	Ample
84)	Temperature Calibrator	Ample
85)	Pressure Calibrator	Ample
86)	Sensitive Clamp	Ample

## Factory Equipment & Machinery List

*Norsinghachar, Noakanda, Gozaria, Palash, Narsingdi.*

### LIST OF MACHINE

S/L	Name of Machinery	Model	Origin	Year of Build	Qty	Section
1	HT Winding Machine	BRX 85	China	2016	1	Coil
2	LT Winding Machine	BRX 400	China	2016	1	Coil
3	V Knotch Punchuring Machine	JV 500	China	2016	1	Core
4	Cutting Machine	Q 12-05-1000	China	2016	1	Core
5	Air Pressure Wire Tension	Q1-50-6	China	2016	1	Coil
6	Reversible Tension Set	KNL 50-1	China	2016	1	Coil
7	Press Board Cutting	.....	.....	2016	1	Coil
8	Compressor	LXH-2080	.....	2016	1	Core
9	Transformer Oil Purifier	ZYD-100	China	2012	1	Trans
10	Transformer Oil Purifier	.....	China	.....	1	Trans
11	Vacuum Machine	2X-704	China	.....	1	Trans
12	Vacuum Machine	2X -30A	China	.....	1	Trans
13	Hi Pot	.....	...	.....	1	Trans
14	Heat Chember	3-φ,A/C	India	2016	1	Paint
15	Powder Coating Machine	3-φ,A/C	India	2016	1	Paint
16	Compressor	JBV-0.8/8	korea	2016	1	Paint
17	Seven Bath System (Chemical Treatment )		India	2016	1	Paint
18	Gas Cutting Machine	....	.....	2,016	1	Gas cutt.
19	Swing Beam Shearing Machine	.....	China	2016	1	Feb.
20	Hydraulic press Brake	.....	China	2016	1	Feb.
21	CNC Flame/Plasma Cutting Machine	CNC-3012	China	2016	1	Feb.
22	Stand Drill Machine	.....	China	.....	1	Feb.
23	Welding Machine(Rilon)	....	....	.....	1	Feb.
24	Welding Machine(Riland)	.....	.....	....	1	Feb.
25	Welding Machine	BX1-500	.....	.....	1	Feb.

26	Welding Machine	ARC 400	....	....	1	Feb.
27	Grinding Machine	DW 803-B1	Germany	....	4	Feb.
28	Drill Machine	...	....	....	2	Feb.
29	Busbar Processing Machine	JPMX-503 ESK	China	....	1	S.G
30	Portable Banding Machine	....	China	....	1	S.G
31	Stand Drill Machine	XJQ 5125	China	....	1	S.G
32	Drill Machine	....	....	....	1	S.G
33	Jigsaw Machine	DW 341	Germany	....	1	S.G
34	Ferroul Printer Machine	LM-390A	China	....	1	S.G
35	Heat Gun Machine	GHG 500-2	Romania	....	1	S.G
36	Heat Gun Machine	JET 2200	China	2016	3	S.G
37	Drill Machine	CT 10069	China	2016	1	S.G
38	Drill Machine	SL07-10A	China	2016	1	S.G
39	Grinding Machine	DW 801	Germany	2016	2	S.G
40	Lathe Machine	....	....	<b>2016</b>	1	Lathe
41	Stand Drill Machine	....	....	2016	1	Lathe
1	Screw Driver Set	Stanly-62-511	Taiwan	....	2	S.G
2	Clip On Meter	SN:w8085181	Thailand	....	1	S.G
3	Matam	....	....	....	5	S.G
4	Cable Cutter	....	....	....	4	S.G
5	Hand Punch(Rubicon)	....	....	....	3	S.G
6	Boot Lugs punch	...	....	....	2	S.G
7	Range 6"	...	....	....	1	S.G
8	Range 8"	...	....	....	1	S.G
9	Range 10"	...	....	....	1	S.G
10	Range 12"	...	....	....	1	S.G
11	Combination Pliers	...	....	....	2	S.G
12	Cutting Pliers	...	....	....	2	S.G
13	Greyay Pliers	...	....	....	1	S.G
14	Rivit Gun Machine	<b>SRC HR 705</b>	....	....	2	S.G
15	L Daly 10	....	....	....	1	S.G

16	L Daly 13	....	....	....	1	S.G
17	L Daly 14	....	....	....	1	S.G
18	Daly 20 (Ring)	....	....	....	1	S.G
19	Daly 19 (Ring)	....	....	....	1	S.G
20	Daly 17 (Ring)	....	....	....	1	S.G
21	Daly 24	....	....	....	1	S.G
22	Daly 17	....	....	....	2	S.G
23	Daly 16	....	....	....	2	S.G
24	Daly 15	....	....	....	4	S.G
25	Daly 14 (Ring)	....	....	....	1	S.G
26	Daly10(Ring)	....	....	....	1	S.G
27	Daly 7(Ring)	....	....	....	1	S.G
28	Daly 14	....	....	....	1	S.G
29	Daly 13	....	....	....	1	S.G
30	Daly 12	....	....	....	1	S.G
31	Daly 11	....	....	....	1	S.G
32	Daly 8	....	....	....	1	S.G
33	knife	....	....	....	3	S.G
34	Screw Driver Star	....	....	....	2	S.G
35	Screw driver Minas	....	....	....	1	S.G
36	Hamer	....	....	....	1	S.G
37	Mesurement tape	....	....	....	2	S.G
38	24 Pcs Socket Set(Amtech)	....	....	....	1	S.G
39	Hand Punch(jainson)	....	....	....	10	S.G
40	Rivit Gun Machine(Rubicon)	....	....	....	2	S.G
41	Rivit Gun Machine(SRC)	....	....	....	3	S.G
42	Range 10"(Tolson)	....	....	....	1	S.G
43	Range 8"(Tolson)	....	....	....	3	S.G
44	Range 6"(Yato)	....	....	....	4	S.G
45	LN Key Set (Yato)	....	....	....	2	S.G
46	Screw Driver Set(Lancer)	....	....	....	1	S.G
47	Knose Pliars(Wately)	....	....	....	4	S.G
48	Matam 10"	....	....	....	2	S.G
49	knife	....	....	....	3	S.G
50	Combination Pliars	....	....	....	1	S.G
51	File 8" Flat	....	....	....	1	S.G
52	knife Blade Box	....	....	....	1	S.G
53	Daly 8(AmMuch)	....	....	....	3	S.G
54	Daly 10(AmMuch)	....	....	....	3	S.G

55	Daly 13(AmMuch)	....	....	....	7	S.G
56	Daly 17(AmMuch)	....	....	....	10	S.G
57	Daly 19 (AmMuch)	....	....	....	10	S.G
58	L Daly 13(tolsen)	....	....	....	2	S.G
59	L Daly 10(Tolsen)	....	....	....	2	S.G
60	Ldaly 14(Tolsen)	....	....	....	2	S.G
61	Cutting Pliers	....	....	....	6	S.G
62	Sprey Gun	....	....	....	1	Paint
63	Cutting Torch	....	....	....	1	Gas Ctuu.
64	Verniar Scale	....	....	....	1	Gas Ctuu.
65	Mesurement tape	....	....	....	1	Gas Ctuu.
66	Oxigen meter	....	....	....	1	Gas Ctuu.
67	Gas Welding Torch	....	....	....	1	Gas Ctuu.
68	LP Meter	....	....	....	1	Gas Ctuu.
69	Oxigen Celender	....	....	....	2	Gas Ctuu.
70	AC Telent	....	....	....	1	Gas Ctuu.
71	Range 18	....	....	....	1	Trans
72	Daly 44	....	....	....	1	Trans
73	Daly 38	....	....	....	2	Trans
74	Daly 36	....	....	....	2	Trans
75	Daly 30	....	....	....	2	Trans
76	Daly 22	....	....	....	2	Trans
77	Daly 19	....	....	....	1	Trans
78	Daly 24	....	....	....	1	Trans
79	Daly 22 (Ring)	....	....	....	3	Trans
80	Daly 28(Ring)	....	....	....	1	Trans
81	C Clum	....	....	....	1	Trans
82	Hamer 1 ib	....	....	....	2	Trans
83	Hamer 2 ib	....	....	....	3	Trans
84	Hamer 2.5 ib	....	....	....	1	Trans
85	Range 6"	....	....	....	1	Trans
86	Range 8"	....	....	....	2	Trans
87	Range 10"	....	....	....	2	Trans
88	Range 18"	....	....	....	1	Trans
89	Cheger	....	....	....	3	Trans
90	Combination Pliers	....	....	....	2	Trans
91	Pipe Range	....	....	....	1	Trans
92	Steel Scale 1"	....	....	....	1	Trans
93	Steel Scale 2"	....	....	....	1	Trans

94	Steel Scale 3"	....	....	....	1	Trans
95	Verniar Scale(Digital)	....	....	....	1	Trans
96	Matam 10"	....	....	....	2	Trans
97	Wire Gause	....	....	....	1	Trans
98	Knife	....	....	....	2	Trans
99	LN Key Set (Yato)	....	....	....	1	Trans
100	Screw driver Set	....	....	....	1	Trans
101	Mesurement tape	....	....	....	3	Trans
102	Daly set	....	....	....	1	Trans
103	Copper Cutter	....	....	....	1	Trans
104	Greinding Machine	....	....	....	1	Trans
105	Drill Machine	....	....	....	1	Trans
106	Rivit Gun	....	....	....	1	Trans
107	Cutting Pliars	....	....	....	1	Trans
108						
109						
110						
111						