



General Overview



HAEFELY

Current and voltage – our passion

RHOMBERG

INSTRUMENTACIÓN Y ELECTRÓNICA INDUSTRIAL

Instruments



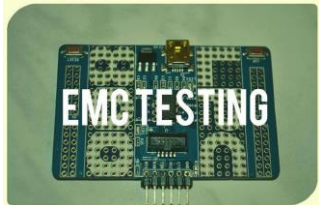
High Voltage



EMC Measurement



Application & Device Under Test (DUT)



Solution for Transformer Testing

DTTS & PTTS
Distribution & Power
Transformer Test System
[DTTS Brochure](#)



**Transformer Loss
Measurement System**
[TMS - Brochure](#)



**Impulse Generator and
HiAS Measuring System**
[Impulse Brochure](#)



ACS – AC Test Systems
[ACS - Brochure](#)



2293
Winding Resistance &
Transformer Turn Ratio
Combined Unit
[2293 - Brochure](#)



2883 - Tan Delta & C
12 kV – 47nF
[2883 - Brochure](#)



5311
Frequency Response
Analyzer – FRA
[5311 - Brochure](#)



New DDX 9160 & 9161
Partial Discharge Detector
[DDX - Brochure](#)



Solution for Cable Testing

**Mobile
Resonant Test System
for Cable testing
RSKF - Brochure**



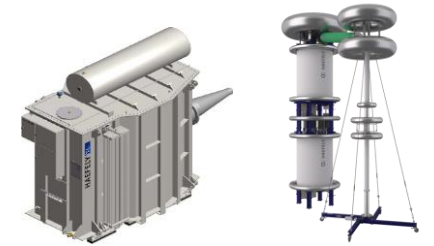
**Impulse Generator and
HiAS Measuring System
Impulse Brochure**



**HVDC
for Cable Testing
PGR - Brochure**



**AC System
for Cable Testing
RTS - Brochure**



**NK – Standard Capacitor
KK – Coupling Capacitor
NK - Brochure**



**2823 - Laboratory
Tan Delta & C Device
2883 - Brochure**



**New DDX 9160 & 9161
Partial Discharge Detector
DDX - Brochure**



**CTTS Serie
Water Cable Termination
CTT - Brochure**



Solution for On-Site Testing

**Mobile
Resonant Test System
for Cable testing
RSKF - Brochure**



**PGRO - Mobile HVDC
for Cable Testing**



**Impulse Generator and
HiAS Measuring System**

Impulse Brochure



**2293
Winding Resistance &
Transformer Turn Ratio
Combined Unit
2293 - Brochure**



**New DMI 552 & 553
Digital KV Meter
DMI - Brochure**



**2883 - Tan Delta & C
12 kV – 47nF
2883 - Brochure**



**5311
Frequency Response
Analyzer – FRA
5311 - Brochure**



**New DDX 9160
Partial Discharge Detector
DDX - Brochure**



ACS – AC Test Systems
[ACS - Brochure](#)



2881 - Tan Delta & C
15kV and Power up to 100kVA
[2881 - Brochure](#)



New DDX 9160 & 9161
Partial Discharge Detector
[DDX - Brochure](#)



2293
Winding Resistance &
Transformer Turn Ratio
Combined Unit
[2293 - Brochure](#)



EGT 50
AC Withstand & Partial
Discharge Test



KIT 4.0
Multi Testing Purpose
AC – DC – IMP
[KIT 4.0 - Brochure](#)



Impulse Generator and
HiAS Measuring System
[Impulse Brochure](#)



New DDX 9160 & 9161
Partial Discharge Detector
[DDX - Brochure](#)



2823 - Laboratory
Tan Delta & C Device
[2883 - Brochure](#)



NK – Standard Capacitor
KK – Coupling Capacitor
[NK - Brochure](#)



New DMI 552 & 553
Digital KV Meter
[DMI - Brochure](#)



**2763 / 2767 / 2769
VT & CT Instruments
Transformer Error
Measurement**

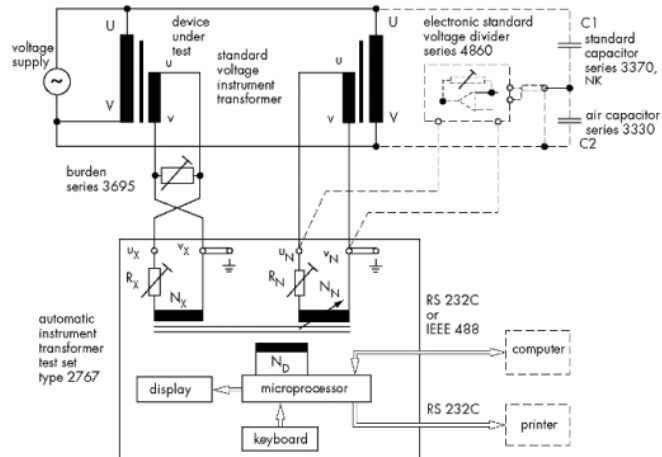
**3695
Programmable Electronic
Voltage Burden**

**3691
Programmable Electronic
Current Burden**

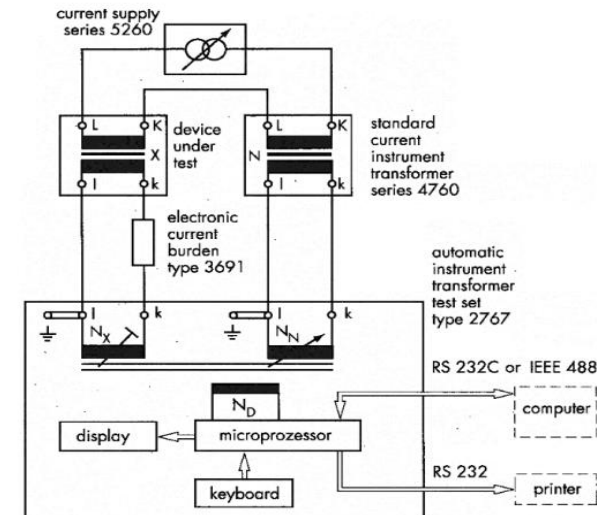
**4762 – 4761 – 4764
Current Comparator
400 A – 2000 A – 10000 A**



Test circuit for voltage instrument transformer



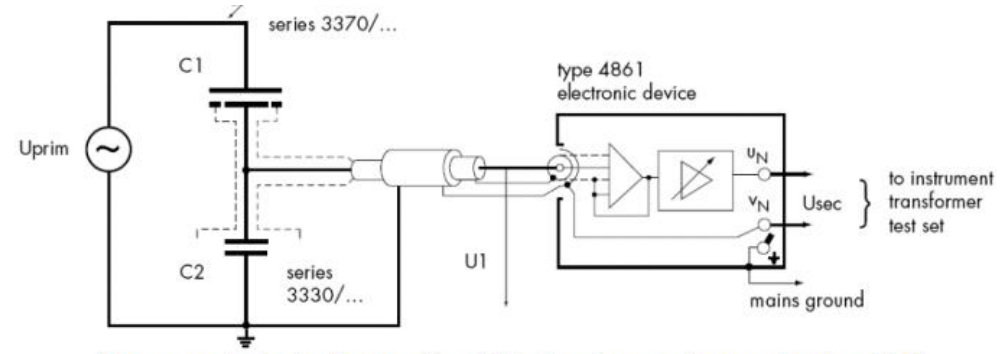
Test circuit for current instrument:



4861
Electronic High Precision
Standard Voltage Divider
Measurement



Brochure Link
[2767 - 2767 – Brochure](#)
[3695 - 3695 – Brochure](#)
[4861 - 4861 – Brochure](#)
[4761/4764 - Current Comparator Brochure](#)



Measurement circuit with capacitive divider for primary voltage greater than 1 kV

Legend

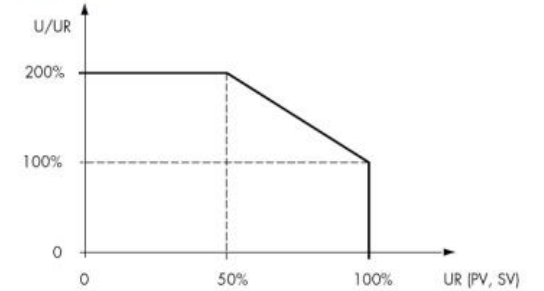
- PV Primary rated voltage
- SV Secondary rated voltage
- CR Capacitive divider ratio (C-Ratio)
- U_{prim} Primary voltage
- U_{sec} Secondary voltage
- U1 Electronic divider input voltage
- U Test voltage (primary or secondary)
- UR Rated voltage (primary or secondary)
- U/UR Excitation

Capacitive divider ratio

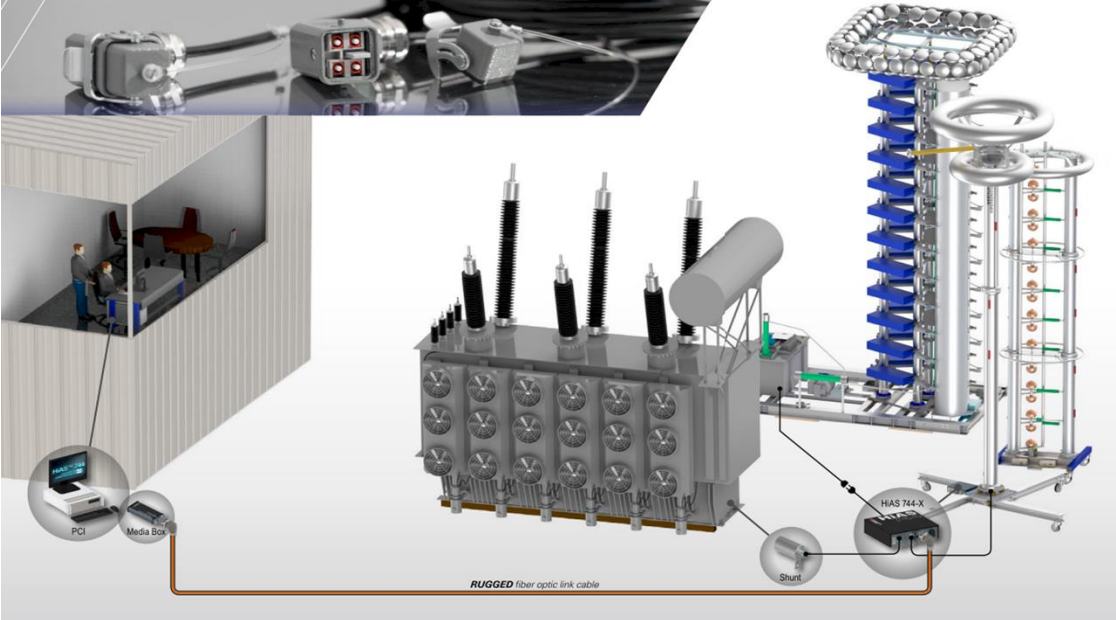
$$CR = 1 : \frac{C1 + C2}{C1} = 1 : \frac{U_{prim}}{U1}$$

Excitation

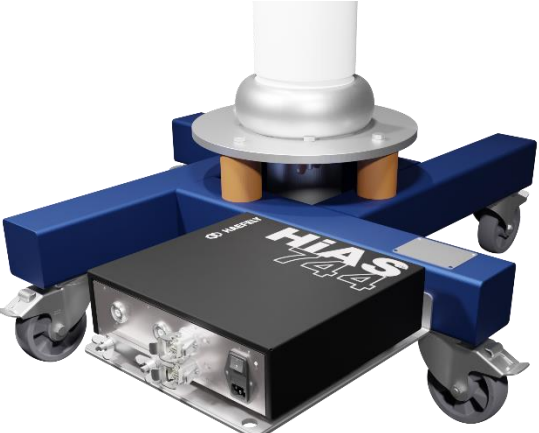
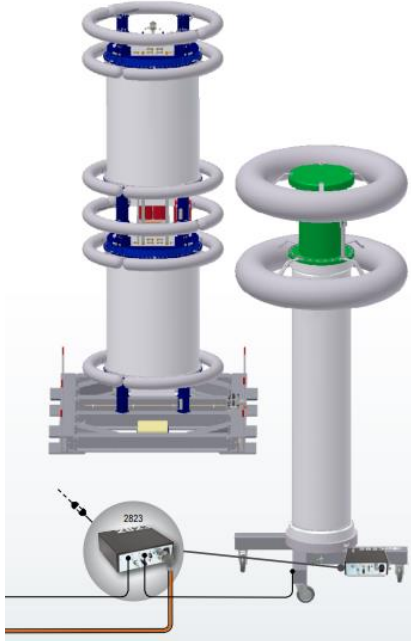
$$\frac{U}{UR} = \frac{U_{prim}}{PV} = \frac{U_{sec}}{SV}$$



☑ HiAS 744 (impulse measurement)



☑ IDAS 2823 (C tanD measurement)



One Single Software Platform for Measuring Devices

