

# CVT-765

capacitor voltage transformer tester



Vanguard Instruments  
A DOBLE COMPANY





# CVT-765

## capacitor voltage transformer tester

### Product Overview

The CVT-765 can measure the turns-ratios of Capacitor Voltage Transformers ranging from 75 to 15,000. The measured turns-ratio, winding polarity, and winding phase angle are displayed on the unit's LCD screen.

A transformer's nameplate voltages can also be entered, and the CVT-765 will display the turns-ratio percentage error by comparing the test results with the nameplate voltage values. This convenient feature eliminates any user calculation errors when testing transformers.

The Vanguard CVT-765 is a microprocessor-based, single phase, automatic, transformer turns-ratio tester. This portable test unit is specifically designed to measure the turns-ratios of Capacitor Voltage Transformers (CVT's).

The CVT-765 determines the transformer turns-ratio using the IEEE C57.12.90 measuring method. It uses a 7440Vac excitation voltage source to accurately measure the turns-ratio of Capacitor Voltage Transformers with a rating of up to 765KV. The transformer turns-ratio is determined by precisely measuring the voltages across the unloaded transformer windings.

### User Interface

The CVT-765 features a back-lit LCD (128 x 64 pixels) screen that is viewable in bright sunlight and low-light conditions. A rugged 16-key membrane keypad is used to enter test information and to operate the unit.

### Test Record Storage

The CVT-765 can store 128 records of 33 readings internally, and up to 999 test records on an external USB Flash drive. Test records can be recalled using the included Transformer Analysis PC Software.

### Computer Interface

Windows®-based Transformer Analysis software is provided with each unit. Using this software, the user can retrieve test records from the CVT-765 via the RS-232C interface or by using a USB Flash drive, analyze test results, and print test results on a desktop printer. Test results are automatically exported to PDF, EXCEL, and XML formats.

### Operating Voltages

The CVT-765 can be operated from 100 - 120 Vac or 220 - 240 Vac. The proper voltage can be set using the voltage selection switch on the front panel.

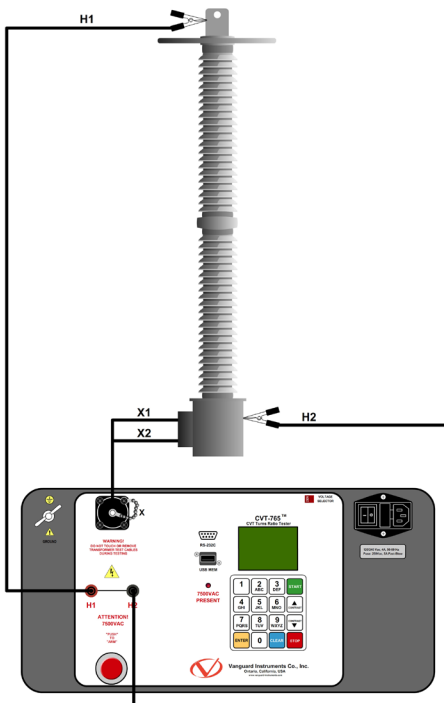
### outstanding features

- Can test CVT's rated up to 765 KV
- Displays turns ratios from 75 - 15,000 : 1
- Calculates turns ratio percentage error when nameplate voltages are provided
- Displays winding polarity and phase angle

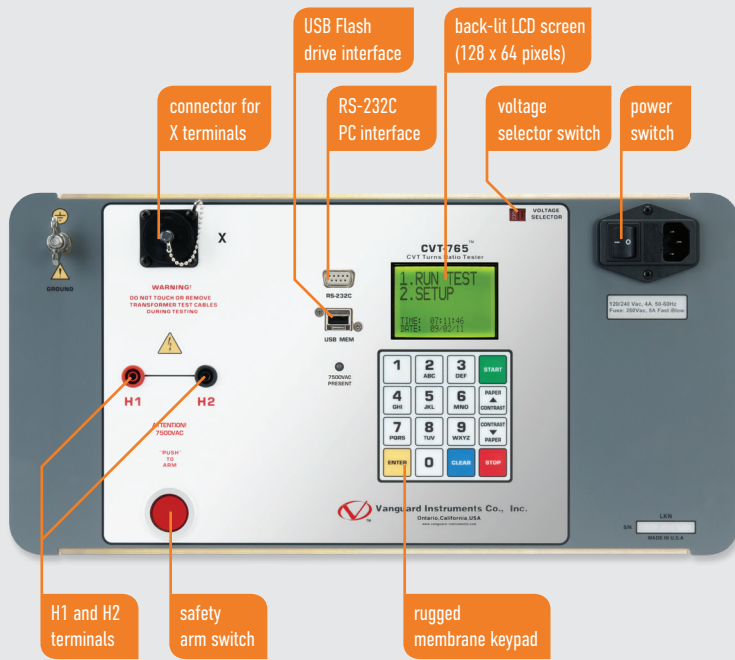
### ordering information

Part No.	Description
9025-UC	CVT-765 and test cables

### CVT-765 connections



# CVT-765 Features



## sample test results

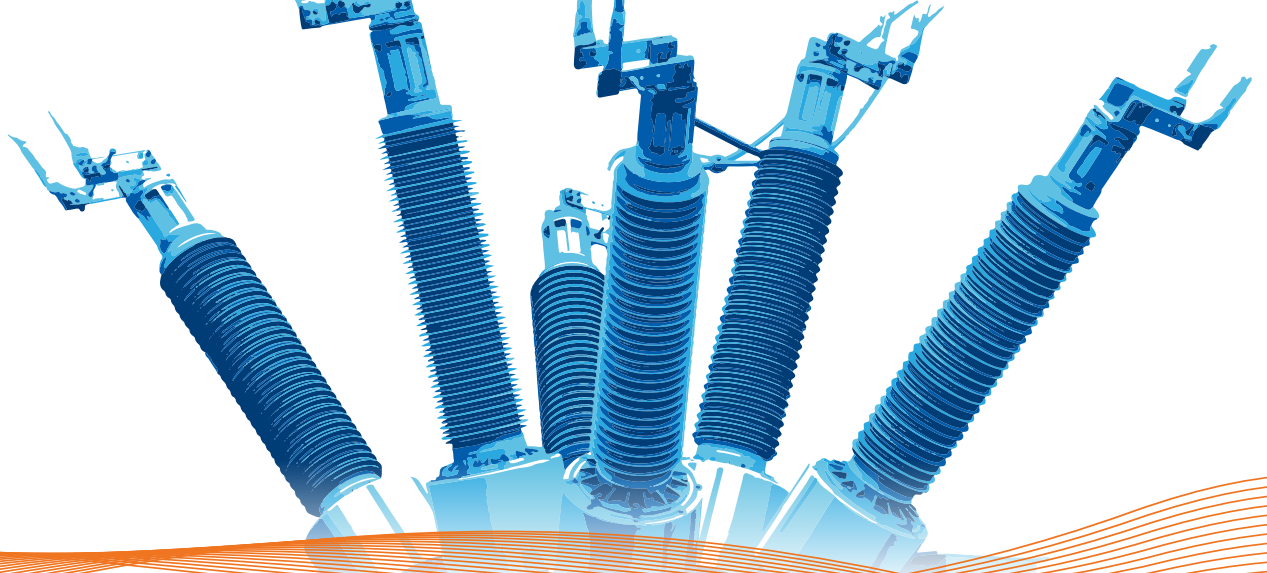


Measured Turns Ratio  
Phase Angle  
Percentage Error

## CVT-765 technical specifications

<b>physical specifications</b>	<b>Dimensions:</b> 19½" W x 12" H x 17" D (49.5 cm x 30.5 cm x 43.2 cm) <b>Weight:</b> 65 lbs. (29.5 Kg)	<b>input power</b>	100-120 Vac or 220-240 Vac (selectable), 50/60 Hz
<b>measuring method</b>	ANSI/IEEE C57.12.90	<b>ratio measuring range</b>	75 – 15,000 : 1 (5-digit resolution)
<b>turns-ratio accuracy</b>	75–5,000 (±0.25%), 5,001–10,000 (±0.35%), 10,001–15,000 (±0.5%)	<b>test voltage</b>	7440 Vac @ 50 mA
<b>phase angle measurement</b>	0 – 360 degrees accuracy: ±0.2 degree	<b>polarity reading</b>	in-phase or out of phase indication
<b>display</b>	back-lit LCD screen (128 x 64 pixels) viewable in bright sunlight and low-light levels	<b>computer interfaces</b>	one RS-232C PC interface, one USB Flash drive interface
<b>internal test record storage</b>	128 records; each record can contain up to 33 readings	<b>external test record storage</b>	Up to 999 test records on external USB Flash drive
<b>pc software</b>	Windows®-based transformer turns-ratio analysis software is included with purchase		
<b>safety</b>	designed to meet IEC 61010A-1 and CAN/CSA C22.2 No. 1010.1-92 standards	<b>humidity</b>	90% RH @ 40°C (104°F) non-condensing
<b>temperature</b>	<b>Operating:</b> -10°C to +50°C (+15°F to +122°F) <b>Storage:</b> -30°C to +70°C (-22°F to +158°F)	<b>altitude</b>	2,000 m (6,562 ft) to full safety specifications
<b>cables</b>	one 50 ft. (15.24m) H cable, one 15 ft. (4.57m) X cable, one power cable, one safety ground cable	<b>warranty</b>	one year on parts and labor

**NOTE :** the above specifications are valid at nominal voltage and ambient temperature of +25°C (+77°F). Specifications are subject to change without notice.



## Instruments designed and developed by the hearts and minds of utility electricians around the world.

Founded in 1991 and located in Ontario, California, USA, Vanguard Instruments™ offers a wide range of diagnostic test equipment that accurately and efficiently measures the health of critical substation equipment, such as transformers, circuit breakers, and protective relays.

Our first product was a computerized, extra high voltage (EHV) circuit breaker analyzer, which became the forerunner of an entire line of EHV circuit breaker test equipment. Over the years, our portfolio has grown tremendously to include microcomputer-based precision micro-ohmmeters; single- and three-phase transformer winding turns-ratio testers; transformer winding-resistance meters; mega-ohm resistance meters; and a variety of other application-specific products.

Our instruments are rugged, reliable, accurate, and user friendly. They eliminate tedious and time-consuming operations, while providing fast, complex test-result calculations. Using our equipment helps reduce errors and eliminates the need to memorize long sequences of procedural steps.

In 2017, Vanguard Instruments became a part of Doble Engineering Company, an energy industry leader in hardware, software, and services that diagnose and monitor the health of critical assets.



**Vanguard Instruments**

A DOBLE COMPANY

1520 S. Hellman Avenue  
Ontario, California 91761, USA  
**Phone** 909-923-9390 • **Fax** 909-923-9391

[www.vanguard-instruments.com](http://www.vanguard-instruments.com)

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