

# HAEFELY

# Addendum TTR279X:

This document describes the changes and improvements, which have been made to firmware Versions 2.6.7 (or newer) of the TTR2795 and firmware Versions 1.1.4 (or newer) of the TTR2796.

These firmware versions contain the following changes:

- A complete New algorithm to detect the correct clock-number (New Semi-Automatic mode)
- Proper display of 180° Phase shift (Improved Manual mode)
- Option to show the Zig-zag turns ratio based on the whole Z winding or a Single leg of the Z.
- A Ratio Limit is added to the Setup screen- Additional Debug information
- Possibility to choose in the Setup; to print the "Voltage Ratio" or "Turns Ratio" on the paper

#### New Semi-Automatic mode:

Under Setup the user can select to input the: "HV- & LV- Config" and also the "Ph Displacement".

SETUP Enter	DUT Parameters
HU Config LV Config	
Ph Displacement Test Voltage	Auto
HU Nom Voltage LV Nom Voltage	16.000kU 0.408kU
Bot Tap Number	3 1
UP LOAD	SAVE PRINT

The TTR will find out the Ph Displacement (clock-number) and verify if the selected Settings for: "HV- & LV- config" under "Setup", fit with the "Ph Displacement (clock-number). If not it will display an error message.

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HAEFEL	GE TEST	Tettex	HAEFELY					ely is a subsidiar bell Incorporated		gh Voltage st Business:
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#### Improved Manual mode:

The (new) Manual Mode will make a quick check to decide if the windings are not reversed connected (180° Phase shift). It will verify if the Ph Displacement given under "Setup", fits with the selected Setting for: "HV- & LV- Config" and displays an error message in case the two don't match.

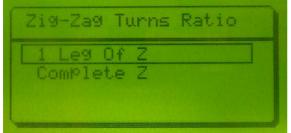
<b>ELLER</b>	Ente	r DUT Para	meters
HU Config			
LU Config			Yn
Ph Displa	cement		1
Test Volt	age		1000
HU Nom Vo	lta9e		16.000kU
LU Nom Vo	ltage		0.408kU
Total Tap	5		3
Bot Tap N	umber		1
UP	LOAD	SAVE	PRINT

# Option to show the Zig-zag turns ratio:

The Zig-zag Turns ratio can be selected, in order to measure the complete Z-winding or a Single leg of the Z. (complete Z is recommended and matches the previous firmware versions of the TTR2795/2796. 1 Leg of Z is the way some older TTR instruments display the Z-winding turns ratio and the way some of our customers like it to be displayed)

OPTIONS Ente	r Parameters
Debug Report	
Display Ratio Show Config Descr.	Turns Yes
Zig-Zag Turns Ratio	Complete Z
Instrument ID Serial No	TTR-2795 152037
Firmware Ver.	2.6.7
UP-and particular and	

Select between "1 Leg of Z" and "Complete Z".



### Ratio Limit:

A ratio Limit can be set in the setup and an error message will appear if the ratio measured by the TTR is higher than the limit set by the user.

SETUP Enter DU1	Parameters
Nom Tap Number Tap Setup Max Deviation DUT Serial No DUT Type DUT Type	2 Manual 0.50%
Operator Ratio Limit	50000 ]
UP LOAD SA	IVE PRINT

# Additional Debug information:

The "Debug Report" can give important information to the Technical department of Tettex regarding a test performed by the TTR. In case of false detection of a 3-Phase transformer, please Switch On the Debug Report and re-test the transformer. Send the Debug Report to: support@tettex.com

OPTIONS Enter	• Parameters
Date	13-06-12
Time	12:14:31
Standard	IEC-UDE
Step Tap-Tap	
Tap Numbering	Numeric
Debug Report	ON
DisPlay Ratio	Voltage
Show Config Descr.	Yes
	× 1

Select between "OFF" and "ON".

Debug	Report
OFF	
ON	

"Voltage Ratio" or "Turns Ratio":

The TTR can print either the "Voltage Ratio" or the "Turns Ratio" on paper. After and during the measurement the ratio on the display can be switched between "Voltage Ratio" or "Turns Ratio".

OPTIONS	Enter Parameters
Date	13-06-12
Time	12:14:31
Standard	IEC-UDE
Step Tap-Tap	
Tap Numbering	Numerio
Debug Report	UFF
DisPlay Ratio	Tunne
Show Config Descr.	. Yes
UP	

Select between "Turns" and "Voltage".

Turns		
Voltag		
vo1040		

In case any questions or problems arise with your TTR279X please contact our Technical support at: <a href="mailto:support@tettex.com">support@tettex.com</a>