



**Oberebenestrasse 11
5620 Bremgarten
Switzerland
Tel. +41 56 648 60 10
Fax. +41 56 648 60 11**

**Single Phase - Battery Operated
Automatic Transformer Turns Ratiometer
Test System**

**Model: TR-1
Model: TR-1P**

Command Set

TR 1 Communication Port

Hardware Connection

Serial Interface RS232

9 pole D-Sub

Pin 2 TXD Data TR-1 to Computer

Pin 3 RXD Data Computer to TR-1

Pin 7 GND

+/- 12 V Signals

Protocol: 19200 Baud, 8 Bit, 1 Stop bit, no parity

TR 1 Commands

gvl	Get Version	Type, Version, S/N, RIN (Raytech Id Number) eg: TR-1,1.02,284134,710201
gvz	Get Version	same as gvl Reloads the auto switch off timer for 120sec Send this command every 5sec to avoid auto switch off
ma x y	Measure	Measures x = “ “ no results during Measurement x = 1 during measuring, the actual Values are sent to the Host After approx. 10 sec the TR1 stops automatically x = 11 measure and display values of the Transformer without time-out Command er stops measurement y = Voltage [1,5,10,40] Ret: “*6 Wait” immediately to confirm command MA,a,b,c,d“ a -> Ratio of Phase x b-> Angle of Phase deviation (units in degrees) c -> Current of Phase x (in mA) d -> 0
er	Stop Measurement	
ea	Keeps On	Keep the TR1 alive, Send this command to the TR1 to keep the Power on. After a time of 120s
sr a	Set Testvoltage	Set Testvoltage a = [1,5,10,40]