

DESIGNATION		TRI-PHASE ACCURATE RATIO METER (Portable unit)																										
Configuration <ul style="list-style-type: none"> - Touch Screen 7" - or Keyboard/Mouse - or PC control <p>Rack presentation or rack case on simple request</p> Dimensions & Weight <ul style="list-style-type: none"> • Length x Width (mm) • Height / Depth (mm) • Weight (Kg) 		MRT 3 4 Test Voltages, option for 5 tests voltages è Mono Phase injection (Automatic phase after phase)		MRT 3 G 5 Test Voltages, option for 6 tests voltages è Mono Phase injection (Automatic phase after phase)																								
		 465 x 380 mm 175 mm 10 kg Proof Case IP 67		 465 x 380 mm 175 mm 13 kg Proof Case IP 67																								
Main applications <ul style="list-style-type: none"> • Power Transmission & Distribution Transformers • Auto Transformers • Instrument Transformers (CT, VT & CVT's) 		            																										
Main functions <ul style="list-style-type: none"> • Direct measurement of turns ratio • Ratio error detection • Phase angle error detection • Polarity test • Interturn short circuit detection • Cut spire / circuit detection • Coupling connection & Tap changer error • Inversion of sub-coils detection • Abnormality in magnetic circuit detection 		            																										
Main characteristics <ul style="list-style-type: none"> • Power supply • Test Frequency (of Main power supply) • Test Voltages • Clock Index / Vector group 		<p align="center">85 V - 264 V / 45 Hz - 65 Hz (+ Autonomous power supply on rechargeable battery in option) Industrial frequency of the mains power supply</p>																										
Measuring specification <ul style="list-style-type: none"> • Simultaneous display of results on 3 phases • Turns ratio range • Phase angle • Excitation current 		<p align="center">3 V - 10 V - 40 V - 120 V (Mono) (+ 220 V mono in option) 00 - 11</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Measuring Range</th> <th>Display</th> <th>Resolution</th> <th>Accuracy</th> </tr> </thead> <tbody> <tr> <td>0.1/1 --> 20 000 / 1 0° - ±180° 0 - 1 A</td> <td>5 1/2 digits 5 1/2 digits 6 or more digits</td> <td>1.10⁻⁴ 0.01° 1 μA</td> <td>£ 0.025 % Rdg. ± 1 digit £ 0.5° Rdg. ± 1 digit £ 1.0 % Rdg. ± 1 digit</td> </tr> </tbody> </table>			Measuring Range	Display	Resolution	Accuracy	0.1/1 --> 20 000 / 1 0° - ±180° 0 - 1 A	5 1/2 digits 5 1/2 digits 6 or more digits	1.10 ⁻⁴ 0.01° 1 μA	£ 0.025 % Rdg. ± 1 digit £ 0.5° Rdg. ± 1 digit £ 1.0 % Rdg. ± 1 digit																
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Vettiner - Customer benefit <ul style="list-style-type: none"> • Over 86 years experience/Ratio test (since 1933) • All transformers types mono & three-phase • Easy use (Built-in soft assistance in addition) • fast measurements (Few seconds only) • Automatic Vector Group detection • Up to 1 spire more or less detection • Ready/Edition of a test report on Excel or pdf... • Built-in internal memory of test results/PC Transfer • 2 USB plugs (Storage, printing, ...) • Sturdiness & reliability over time • Total safety of operator • Built-in auto test & auto protection • 2 years warranty • After sales service 		            																										
Environment <ul style="list-style-type: none"> • Operating temperature • Storage temperature 		<p align="center">0 °C up to + 40 °C -10 °C up to + 50 °C</p>																										
Eventual options or accessories <p align="center">References</p> <p align="center">Available sets of measuring cables : Different length & clamps</p> <ul style="list-style-type: none"> • All possible combinations are available including possibility of addition of different length of extension cables 1. Select your required length of cables "extension" ("XX") 2. Select your expected size of clamps with octopus cables <p align="center">Ex. 5 m Extension cable + octopus with small crocodile clamps</p> <p align="center">è 5 m cables test set (Note: already included)</p>		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Description of part of cables</th> <th>Cables Extension "HV" side & "LV" side</th> <th>Octopus Cables + small Clamps "HV" side & "LV" side</th> <th>Octopus Cables + large Clamps "HV" side & "LV" side</th> </tr> </thead> <tbody> <tr> <td>New High Quality of re-enforced elastomere cables</td> <td></td> <td></td> <td></td> </tr> <tr> <td>TCA MRT 5</td> <td>5 m</td> <td>1,25 m *</td> <td>1,25 m *</td> </tr> <tr> <td>TCA MRT 10</td> <td>10 m</td> <td>1,25 m *</td> <td>1,25 m *</td> </tr> <tr> <td>TCA MRT 15</td> <td>15 m</td> <td>1,25 m *</td> <td>1,25 m *</td> </tr> <tr> <td>TCA MRT XX</td> <td>XX m under request</td> <td>1,25 m *</td> <td>1,25 m *</td> </tr> </tbody> </table> <p align="center">Extensions are "inter-connectable" together</p> <p align="center">Remote control is only compatible with full cable set mounted with small crocodile cables only</p> <p align="center">GT ( already included inside MRT 3 G)</p> <p align="center">ASS 12-230</p> <p align="center">Nart</p> <p align="center">C-PRT-MRT</p>			Description of part of cables	Cables Extension "HV" side & "LV" side	Octopus Cables + small Clamps "HV" side & "LV" side	Octopus Cables + large Clamps "HV" side & "LV" side	New High Quality of re-enforced elastomere cables				TCA MRT 5	5 m	1,25 m *	1,25 m *	TCA MRT 10	10 m	1,25 m *	1,25 m *	TCA MRT 15	15 m	1,25 m *	1,25 m *	TCA MRT XX	XX m under request	1,25 m *	1,25 m *
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Calibration <ul style="list-style-type: none"> • Vettiner calibration certificate included • External laboratory calibration certificate 		 <p align="center">ISO 17 025 on request, in option</p>																										

