Comparison of technical characteristics of TDRs

ERSTED TDR RI-307M3 vs BICOTEST Model-T631

TDR inputs 2 channels 1 channel Ranges: 0 -15 m to 0 -32 km full screen, in 12 ranges (zoom of x2, x4, en x8 around curs depending on range) Accuracy: 0.01% 0.2% 1ypically < 0.5% Propagation velocity: Variable 0.330 to 0.999	Model/Parameter	ERSTED TDR RI-307M3	BICOTEST Model-T631
TDR inputs 2 channels 1 channel 1	Туре	2-channel	
Ranges: 0.15 m to 0 - 32 km full screen, in 12 ranges (zoom of x2, x4, 8,x1024 around cursor, depending on range) Accuracy: 0.01% 0.2% Propagation velocity: PVF: V: V2: So to 150 m/µs Resolution: 3 cm in all subranges 4.0.05% of range at 12 kms 0.40 dB max, selectable in 255 steps Maximum sensitivity 30 mV = full scale Pulse characteristics: Amplitude: Width: 10 V into selected impedance 10 Vinto selected impedance 2.5 V into selected impedance Width: 10, 20,50, 100, 200, 500, 1000, 2000, 5000, 10000, 2000, 5000 or 1200 ns, user selectable from 25 \(\Omega \) to 520 \(\Omega \), user selectable stepless adjustment Output Impedance: Noise Reduction Filter: Digital Averaging 1128 Output: Sockets: 2 x BNC (Female) Protection: Via external block 380 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) Maximum sensitivity backlighting (switched cursors with individual control Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Direct, 2 channels L1/L2 and L1.8.L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory	View		
in 12 ranges (zoom of x2, x4, 8,x1024 around curs depending on range) Accuracy: 0.01%0.2% Propagation velocity: PV: V2: V3: V3: V4: V5: V5: V6: V7: V6: V7: V7: V7: V7: V8: V7: V8: V8: V8: V9: V9: V9: V9: V9: V9: V9: V9: V9: V9	TDR inputs	2 channels	1 channel
Propagation velocity: PVF: Voriable 0.330 to 0.999 Voriable 0.300 tro 0.900 Voriable 0.300 tro 0.900 Voriable 0.300 tro 0.900 Voriable 0.300 tro 0.900 Voriable 0.300 tro 0.999 Voriable 0.300 tro 0.900 Voriable 0.400 tro 0.400 tro 0.900 Voriable 0.400 tro 0.400 tro 0.400 Voriable 0.400	Ranges:	in 12 ranges (zoom of x2, x4, 8,x1024 around	in 13 ranges (zoom of x2, x4, or x8 around cursor,
PVF: Variable 0.330 to 0.999 Variable 0.330 to 0.999 Variable 0.330 to 0.999 Vol 300 m/µs 45 to 150 m/µs Resolution: Gain: O-40 dB max, selectable in 255 steps Maximum sensitivity 30 mV = full scale Pulse characteristics: Amplitude: 10 V into selected impedance Width: 10, 20,50, 100, 200, 500, 1000, 2000, 5000, 10000, 2000, 5000, 10000, 2000 or 50000 ns, user selectable from 25 Q to 520 Q , user selectable stepless adjustment Digital Averaging 1128 Output: Sockets: 2 x BNC (Female) Protection: Via external block 380 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) Two active cursors with individual control Memory: Maximum sensitivity 15 mV = full scale ± 0.05% of range at 12 kms 45 to 150 m/µs 45 to 100 m/µs 45 to	,	0.01% 0.2%	Typically < 0.5%
V/2: 50 to 150 m/μs 45 to 150 m/μs Resolution: 3 cm in all subranges ± 0.05% of range at 12 kms Goin: 0.40 dB max, selectable in 255 steps 0-60 dB max, selectable in 6 dB steps Maximum sensitivity 30 mV = full scale 0-60 dB max, selectable in 6 dB steps Maximum sensitivity 15 mV = full scale 2.5 V into selected limpedance Pulse characteristics: 10 V into selected impedance 2.5 V into selected impedance Width: 10, 20,50, 100, 200, 500, 1000, 2000, 5000, 10000, 2000, 5000, 10000, 2000 or 50000 ns, user selectable 2, 10, 30, 100, 300 or 1200 ns, user selectable Output Impedance: from 25 Ω to 520 Ω, user selectable stepless adjustment 50, 75 or 93 Ohms, user selectable Noise Reduction Filter: Digital Averaging 1128 16 MHz Low pass Output: 3 ckets: 2 x BNC (Female) 250 V rms, 0-60 Hz Protection: Via external block 380 V rms, 0-60 Hz 250 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) High resolution LCD with backlighting (switched two active cursors with individual control Memory: Waveform Library up to 1000 waveforms 15 locations that retain information until overwritten Modes: Direct 1 channel Direct 2	PVF:	Variable 0.330 to 0.999	
Gain: 0-40 dB max, selectable in 255 steps Maximum sensitivity 30 mV = full scale 0-60 dB max, selectable in 6 dB steps Maximum sensitivity 15 mV = full scale Pulse characteristics: Amplitude: 10 V into selected impedance 2.5 V into selected impedance Width: 10, 20,50, 100, 200, 500, 1000, 2000, 5000, 10000, 2000, 5000, 10000, 2000 or 50000 ns, user selectable 2, 10, 30, 100, 300 or 1200 ns, user selectable Output Impedance: from 25 Ω to 520 Ω, user selectable stepless adjustment 50, 75 or 93 Ohms, user selectable Noise Reduction Filter: Digital Averaging 1128 16 MHz Low pass Output: Sockets: 2 x BNC (Female) BNC (Female) Protection: Via external block 380 V rms, 0-60 Hz 250 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) High resolution LCD with backlighting (switched cursor: Cursor: Two active cursors with individual control Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables 15 locations that retain information until overwritten Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory		50 to 150 m/µs	
Maximum sensitivity 30 mV = full scale Maximum sensitivity 15 mV = full scale Pulse characteristics: 10 V into selected impedance 2.5 V into selected impedance Width: 10, 20,50, 100, 200, 500, 1000, 2000, 5000, 10000, 20000 or 500000 ns, user selectable 2, 10, 30, 100, 300 or 1200 ns, user selectable Output Impedance: from 25 Ω to 520 Ω, user selectable stepless adjustment 50, 75 or 93 Ohms, user selectable Noise Reduction Filter: Digital Averaging 1128 16 MHz Low pass Output: BNC (Female) BNC (Female) Sockets: 2 x BNC (Female) 250 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) High resolution LCD with backlighting (switched cursor: Cursor: Two active cursors with individual control Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms 15 locations that retain information until overwritten Modes: Direct, 2 channels L1/L2 and L1&L2 Direct 1 channel Comparison (up to 6 sources signal simultaneously): Direct and Memory		3 cm in all subranges	
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20000 or 50000 ns, user selectable from 25 Ω to 520 Ω , user selectable stepless adjustment Digital Averaging 1128 Output: Sockets: 2 x BNC (Female) Protection: Via external block 380 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory Direct and Memory 50, 75 or 93 Ohms, user selectable 16 MHz Low pass 16 MHz Low pass BNC (Female) 250 V rms, 0-60 Hz High resolution LCD with backlighting (switched two active cursors with individual control Two active cursors with individual control Direct 1 channel Direct 1 channel Direct and Memory			
Output Impedance: Noise Reduction Filter: Digital Averaging 1128 Digital Averaging 1128 Output: Sockets: 2 x BNC (Female) Protection: Via external block 380 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory Sockets: 16 MHz Low pass 16 MHz Low pass 18 MHz Low pass Head In MHz Low pass 18 MHz Low pass 18 MHz Low pass 18 MHz Low pass 18 MHz Low pass 19 MHz Low pass 19 Li MHz Low pass 19 Li MHz Low pass 19 Li MHz Low pass 10 Li MHz Low pass 11 Li MHz Low pass 12 Li MHz Low pass 13 Locations that retain information untill overwritten 15 Locations that retain information untill overwritten 15 Locations that retain information untill overwritten Direct 1 channel Direct 2 channels Li	Width:		2, 10, 30, 100, 300 or 1200 ns, user selectable
Output: Sockets: 2 x BNC (Female) Protection: Via external block 380 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) Cursor: Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory	Output Impedance:		50, 75 or 93 Ohms, user selectable
Sockets: 2 x BNC (Female) Protection: Via external block 380 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) Cursor: Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory BNC (Female) 250 V rms, 0-60 Hz High resolution LCD with backlighting (switched) Two active cursors with individual control 15 locations that retain information until overwritten Direct 1 channel Direct 1 channel	Noise Reduction Filter:	Digital Averaging 1128	16 MHz Low pass
Protection: Via external block 380 V rms, 0-60 Hz Display: Type: Color TFT 5.7" (640x480 pixels) Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory 250 V rms, 0-60 Hz High resolution LCD with backlighting (switched) Two active cursors with individual control 15 locations that retain information until overwritten			
Display: Type: Color TFT 5.7" (640x480 pixels) Cursor: Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory	Sockets:	2 x BNC (Female)	BNC (Female)
Type: Color TFT 5.7" (640x480 pixels) High resolution LCD with backlighting (switched Cursor: Two active cursors with individual control Two active cursors with individual control Memory: Waveform Library up to 1000 waveforms 15 locations that retain information until overwritten Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Direct 1 channel Comparison (up to 6 sources signal simultaneously): Direct and Memory		Via external block 380 V rms, 0-60 Hz	250 V rms, 0-60 Hz
Memory: Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory		Color TFT 5.7" (640x480 pixels)	High resolution LCD with backlighting (switchable)
Waveform Library up to 1000 waveforms Cables VF Library up to 300 cables Modes: Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory	Cursor:	Two active cursors with individual control	Two active cursors with individual control
Direct, 2 channels L1/L2 and L1&L2 Comparison (up to 6 sources signal simultaneously): Direct and Memory	Memory:		
	Modes:	Direct, 2 channels L1/L2 and L1&L2	Direct 1 channel
			Direct and Memory
Difference(up to 6 sources simultaneously): L1 / L2 / Differential Direct and Memory Memory			

Comparison of technical characteristics of TDRs

ERSTED TDR RI-307M3 vs BICOTEST Model-T631

Model/Parameter	ERSTED TDR RI-307M3	BICOTEST Model-T631
	Internal Cable VF Library	
	Intermittent faults detect mode	
	Cross Talk mode	
	Line impedance estimation	
	PC data exchange via USB-flash;	
Interface language	English/Russian/Spain (selectable),	English
Interface with PC	Via external USB-Flash	RS 232C to printer or PC
PC software for archiving waveforms	Yes, in the standard delivery	Yes, Optional accessories
Power	Internal Lilon (7.2±0.7) V, 6.6 Ah – 8 hours operation (Auto Power-Off: 264 mins, after last key operation)	Internal NiMH Batteries – 8 hours operation (Auto Power-Off 5 mins after last key operation)
	Ext AC-DC Adapter 12 V	Ext AC Adaptor, 120 V or 230 V available Ext DC, 12 V to 20 V operating; 15 V to 20 V charging
Environmental: Operating Temperature: Storage Humidity	-20 °C +40 °C -50°C +50°C. 98% at 25°C	-5°C to +50°C (23°F to 120°F) -20°C to +65°C (-4°F to 149°F) 93% at +40°C (104°F)
Water ingress:	IP54 – operation (open case) IP67 – transportation (closed case)	IP54
Safety:	TR TS 020/2011 "Electromagnetic compatibility of technical means" TR TS 004/2011 "On the safety of low-voltage equipment"	IEC 1010
Size, W x H x D:	246x70x124 mm	75 x 183 x 300 mm inc handle
Weight:	2.5 kg inc battery	2.5 kg inc battery
Delivery includes:	AC Adapter 12 V, Connecting cable 75 Ohm, 5.0 m, BNC.M -«Alligator clip», Connecting cable 75 Ohm, 0.1m, BNC.M«Alligator clip» Operating Manual CD-ROM with software Accessories bag	Weatherproof Shoulder Bag, 8 rechargeable NiMH cells, 1 x 3 m Test Lead, BNC to Crocodile Clips, AC Adaptor, DC Plug, Operating Manual
Standard Warranty:	1 year	1 year