



## DL9100 Series MFT Technical Information

Voltage				
	DL9110	DL9118	DL9120	DL9130EV
Display Range	0V to 440V		0V to 480V	
Measuring Range	0V to 440V		0V to 480V	
Resolution	1V		1V	
Voltage Accuracy	+/- 5% +/- 2digits		+/- 5% +/- 2digits	
Frequency Range	45Hz – 65HzV		45.0Hz – 65.0HzV	
Frequency Accuracy	+/- 1Hz		+/- 1.0Hz	

Continuity				
	DL9110	DL9118	DL9120	DL9130EV
Display Range (200mA)	0.01Ω to 200Ω		0.01Ω to 2000Ω	
Measuring Range (200mA)	0.10Ω to 200Ω		0.10Ω to 2000Ω	
Accuracy	+/- 2% +/- 5 digits			
Resolution	0.01Ω to 1.99Ω 2.0Ω to 19.9Ω 20Ω to 200Ω		0.01Ω to 19.99Ω 20.0Ω to 199.9Ω 200Ω to 2000Ω	
Test Voltage	>4Vdc >25Vdc Open Circuit			
Test Current	>200mA			
Display Range (15mA)				0.01Ω to 200Ω
Accuracy				+/- 2% +/- 5 digits
Resolution				0.01Ω to 19.99Ω 20.0Ω to 199.9Ω
				>4Vdc >25Vdc Open Circuit
				>15mA
Compliance	IEC61557-4 and IEC61557-10			

Insulation				
	DL9110	DL9118	DL9120	DL9130EV
Display Range		0.01MΩ to 200MΩ		
Display Range		0.05MΩ to 200MΩ		
Accuracy		+/-5% +/-5 digits		
Resolution		0.01MΩ to 1.99MΩ 2.0MΩ to 19.9MΩ 20MΩ to 200MΩ		
Alarm Warning	<1MΩ Audible		<1MΩ Screen & Audible	
Test Voltage	250/500	250/500/1000V		
Test Voltage Specification	-0% +20% (open circuit)			
Test Current	1mA into U <sub>N</sub> (1000Ω/V)			
Compliance	IEC61557-2 and IEC61557-10			

No Trip Loop Impedance				
	DL9110	DL9118	DL9120	DL9130EV
Supply voltage	195-253V, 45Hz – 65Hz			
Display Range	0.01Ω to 2000Ω			
Measuring Range	1.00 to 1999Ω (non-trip)			
Accuracy	+/-5% +/-12 digits (to 20Ω) +/-5% +/-5 digits (to 2000Ω)			
Resolution	0.01Ω to 1.99Ω 2.0Ω to 19.9Ω 20Ω to 2000Ω		0.01Ω to 9.99Ω 10.0Ω to 99.9Ω 100Ω to 2000Ω	
Test Current	<15mA RMS			

High Current Loop Impedance				
	DL9110	DL9118	DL9120	DL9130EV
Supply voltage	195-253V, 45Hz – 65Hz			
Display Range	0.01Ω to 2000Ω			
Measuring Range	0.10Ω to 1999Ω (high current)			
Accuracy	+/-5% +/-12 digits (to 20Ω) +/-5% +/-5 digits (to 2000Ω)			
Resolution	0.01Ω to 1.99Ω 2.0Ω to 19.9Ω 20Ω to 2000Ω		0.01Ω to 9.99Ω 10.0Ω to 99.9Ω 100Ω to 2000Ω	
Test Current	3A RMS			

Loop Test PFC Measurement				
	DL9110	DL9118	DL9120	DL9130EV
Display Range	1A to 26kA		0.1A to 26.0kA	
Accuracy	+/-5% +/-5 digits		+/-5% +/-5 digits	
Resolution	1A to 999A 1kA to 26kA		0.1A to 999.9A 1.0kA to 26.0kA	

High Current Line Impedance				
	DL9110	DL9118	DL9120	DL9130EV
Display Range	0.01Ω to 2000Ω		0.01Ω to 2000Ω	
Measuring Range	0.10Ω to 2000Ω		0.10Ω to 2000Ω	
Accuracy	+/-5% +/-5 digits		+/-5% +/-5 digits	
Resolution	0.01Ω to 1.99Ω 2.0Ω to 19.9Ω 20Ω to 2000Ω		0.01Ω to 9.99Ω 10.0Ω to 99.9Ω 100Ω to 2000Ω	
Supply Voltages	195V – 253V	195V – 253V 328V – 440V	195V – 253V 328V – 480V	
Test Current	3A RMS Peak			

Line Test PSC Measurement				
	DL9110	DL9118	DL9120	DL9130EV
Range	1A to 26kA		0.1A to 26.0kA	
Accuracy	+/-5% +/-5 digits		+/-5% +/-5 digits	
Resolution	1A to 999A 1kA to 26kA		0.1A to 999.9A 1.0kA to 26.0kA	

RCD Trip Time Test				
	DL9110	DL9118	DL9120	DL9130EV
Supply Voltages	195-253V, 45Hz – 65Hz			
RCD Types	AC, A & Selective		AC, A, B & Selective	
Nominal Test Current	10mA/30mA/100mA ( ½ , 1, 5 IΔn) 300mA/500mA ( ½, 1 IΔn)		10mA/30mA/100mA ( ½ , 1, 5 IΔn) 300mA/500mA ( ½, 1 IΔn) Variable Mode	
Variable RCD Test	1mA – 500mA			
Test Current Accuracy	-0% +10% at IΔn and 5IΔn -0% +10% at ½ IΔn			
Trip Time Ranges	0 to 2000ms ½ IΔn 0ms - 300ms IΔn general 0ms - 500ms IΔn selective 0 to 40ms 5 IΔn			
Trip Time Accuracy	+/- 5% +/- 2 digits			
Nominal Test Current	10mA/30mA/100mA ( ½ , 1, 5 IΔn) 300mA/500mA ( ½, 1 IΔn)			
Compliance	IEC61557-6 and IEC61557-10			

RDC-DD Trip Time Test				
	DL9110	DL9118	DL9120	DL9130EV
Supply Voltages				195-253V, 45Hz – 65Hz
Current Type				DC
Nominal Test Current				6mA
Test Current Accuracy				-0% +10%
Trip Time Ranges				0 to 10000 IΔn
Trip Time Accuracy				+/- 5% +/- 2 digits
Ramp Test Current Range				2mA – 10mA
Compliance	IEC61557-6 and IEC61557-10			

RCD (Ramp) Trip Current Test		
Range	0.5 IΔn to 1.1 IΔn	
Range (6mA DC)	0.1mA to 10mA (over 30 seconds)	
Accuracy	+/-5% of the expected current	
Step Size	0.1*IΔn	
Step duration	300ms	
Compliance	IEC61557-6 and IEC61557-10	

Additional Date				
	DL9110	DL9118	DL9120	DL9130EV
<b>Weight</b>	1360g			
<b>Dimensions</b>	Width 236mm Depth 130mm Height 91mm			
<b>DL911x Boxed</b>	3045g	3075g	3045g	3075g
<b>DL911x Boxed Dimensions</b>	Width 380mm Depth 195mm Height 250mm			
<b>EAN Barcode</b>	5060082543463	5060082543449	5060082544156	5060082544163

Box Contents				
DL9110	DL9118	DL9120	DL9130EV	
Multifunction Tester		Multifunction Tester		
Padded neck strap		Padded neck strap		
Professional toolbox style carry case		Professional toolbox style carry case		
Mains lead		Mains lead		
1.2M black test lead		1.2M Blue test lead		
1.2M red test lead		1.2M red test lead		
1.2M green test lead		1.2M green test lead		
Black crocodile clip		Blue crocodile clip		
Red crocodile clip		Red crocodile clip		
Green crocodile clip		Green crocodile clip		
MN1500 (AA) 1.5v Batteries x 6		MN1500 (AA) 1.5v Batteries x 6		
Operating Instruction Manual		Operating Instruction Manual		
Calibration certificate		Calibration certificate		
(Optional)	Remote Test Probe	(Optional)	Remote Test Probe	

DL9100 Series Spares and Accessories				
DL9110	DL9118	DL9120	DL9130EV	
<b>LS3W9073</b> – Red/Black/Green 3 wire lead set c/w croc clips and probes		<b>LS3W9100</b> – Red/Blue/Green 3 wire lead set c/w croc clips and probes		
<b>ML9073</b> – Red/Black/Green 13A to 4mm mains lead		<b>ML9100</b> – Red/Blue/Green 13A to 4mm mains lead		
<b>RP9100</b> – Remote Test Probe (suitable for DL9100 Series testers)				
<b>CCDL9100</b> – Toolbox Style Carry Case				
<b>AF27B</b> – 1.6A 1000V HRC FF Fuse		<b>?????</b> – 200mA .....		

## Environmental Conditions

The DL9120 / DL9130EV has been designed to perform tests and measurements in a dry indoor environment.

- Operating Altitude 0 to 2000 metres.
- Overvoltage category IEC 60664/IEC 61010, 300V Category III.
- Pollution degree 2 according to IEC 61010-1.
- Protective system IP40 according to IEC 60529.
- Electromagnetic compatibility (EMC). Interference immunity and emitted interference conforming to IEC 61326-1.
- Operating temperature range of 0°C to 40°C.
- Operating humidity up to 75% without condensation.

The DL9120 / DL9130EV can be stored at any temperature in the range -25°C to +65° The batteries should be taken out of the instrument for storage.

For help or advice on Service and Calibration contact:

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