FLUKE®

1672/1673 FC/1674 FC

Multifunction Tester

Product Specifications

BC
January 2024 Rev. 2, 07/2024 (English)

General Specifications

Maximum voltage between any terminal and earth ground	600 V
Dimensions	26.25 cm x 14.19 cm x 11.93 cm (10.3 in x 5.6 in x 4.7 in)
Weight (with battery)	1.6 kg (3.5 lb)
Battery	BP290, Li-ion, 10.8 V, 2500 mAh, 27 Wh (or equivalent approved by Fluke)
⚠ Fuses (x2)	T 3 A 600 V, IR 20 kA
Temperature	
Operating	0 °C to 40 °C (32 °F to 104 °F)
Storage	-20 °C to 60 °C (-4 °F to 140 °F) limited by battery specification
Relative Humidity	85 % RH @ 10 °C to 35 °C (50 °F to 95 °F) 70 % RH @ 35 °C to 40 °C (95 °F to 104 °F)
Altitude	
Operating	2000 m
Storage	12 000 m
Vibration	MIL-PRF-28800F: Class 2
Safety	
General	
IEC 61010-1	Pollution Degree 2
IEC 61010-2-034	CAT IV 300 V/CAT III 600 V
Performance	
IEC 61557-1	General Requirements
IEC 61557-2	Insulation Resistance
IEC 61557-3	Loop Impedance
IEC 61557-4	Resistance of Earth and Bonding
IEC 61557-5	Earth Resistance
IEC 61557-6	RCD and Voltage Drop
IEC 61557-7	Phase Sequence
IEC 61557-8	Insulation Monitoring Devices for Insulated-Terra Power Distribution Network (IT Systems)
IEC 61557-10	Combined Measuring Equipment

Accessories..... IEC 61010-031
TP165X Remote Probe with cap ..... CAT IV 600 V, CAT III 1000 V, 10 A
TP165X Remote Probe without cap..... CAT II 1000 V, 10 A
TL-L1, TL-L2, TL-L3 Test Leads ..... CAT IV 600 V, CAT III 1000 V, 10 A
Test Probes with cap ..... CAT IV 600 V, CAT III 1000 V, 10 A
Test Probes without cap ..... CAT II 1000 V, 10 A
AC285 Alligator Clip ..... CAT IV 600 V, CAT III 1000 V, 10 A
Country-Specific Mains Cord..... CAT II 250 V, 1000 V dc
Ingress Protection..... IEC 60529: IP40

Electromagnetic Compatibility (EMC)

Some mobile devices (for example, handheld transceivers) that transmit RF energy can transmit levels that exceed 3 V/m and can damage sensitive electronic circuits. To ensure the best performance, do not allow a device that transmits RF energy in >3 V/m to be within 30 cm of the Product while in use.

International ..... IEC 61326-1: Portable CISPR 11: Group 1, Class A

Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the internal function of the equipment itself.

Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low-voltage power supply network that supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Emissions that exceed the levels required by CISPR 11 can occur when the equipment is connected to a test object.

Wireless Radio with Adapter

Frequency Range..... 2400 MHz to 2483.5 MHz
Output Power ..... <100 mW

SIMPLIFIED EU DECLARATION OF CONFORMITY

Hereby, Fluke declares that the radio equipment contained in this Product is in compliance with Directive 2014/53/EU. The full text of the EU declaration is available at the following Internet address: www.fluke.com/red.

Electrical Measurement Specifications

The specification for accuracy is defined as ±(% reading +digit counts) at 23 °C ±5 °C, ≤80 % RH. Between 0 °C and 18 °C and between 28 °C and 40 °C, accuracy specifications may degrade by 0.1 x (accuracy specification) per °C. The specifications apply up to one year from the date of calibration.

Note

Accuracy indicates the intrinsic uncertainty according to IEC 61557.

Voltage Measurement (V)

Range	Resolution	Accuracy 45 Hz to 66 Hz	Input Impedance	Overload Protection
600 V	0.1 V	0.8 % + 3	320 kΩ	660 V rms
Note: The display shows if dc voltage is detected.				

Insulation Resistance Measurement (R_{ISO})

Test Voltage		Accuracy
Model 1672	Model 1673 FC/1674 FC	
100-250-500-1000 V	50-100-250-500-1000 V	+10 %, -0 %

Test Voltage	Insulation Resistance Range	Resolution	Test Current	Accuracy
50 V	10 kΩ to 50 MΩ	0.01 MΩ	1 mA @ 50 kΩ	±(3 % + 3 digits)
100 V	10 kΩ to 20 MΩ	0.01 MΩ	1 mA @ 100 kΩ	±(3 % + 3 digits)
	20 MΩ to 100 MΩ	0.1 MΩ		±(3 % + 3 digits)
250 V	10 kΩ to 20 MΩ	0.01 MΩ	1 mA @ 250 kΩ	±(1.5 % + 3 digits)
	20 MΩ to 200 MΩ	0.1 MΩ		±(1.5 % + 3 digits)
500 V	10 kΩ to 20 MΩ	0.01 MΩ	1 mA @ 500 kΩ	±(1.5 % + 3 digits)
	20 MΩ to 200 MΩ	0.1 MΩ		±(1.5 % + 3 digits)
	200 MΩ to 500 MΩ	1 MΩ		±10 %
1000 V	100 kΩ to 200 MΩ	0.1 MΩ	1 mA @ 1 MΩ	±(1.5 % + 3 digits)
	200 MΩ to 1000 MΩ	1 MΩ		±10 %
Note: The number of insulation tests with full-charge battery is >2000.				

Auto Discharge	Discharge time constant <0.5 second for C = 1 µF or less.
Live Circuit Detection	Inhibits test if terminal voltage >30 V prior to initiation of test.
Maximum Capacitive Load	Operable with up to 5 µF load.
Insulation Safety Pretest (1674 FC)	Connections from the Tester to L, N, and PE are required.

SPD (Surge Protection Device) Insulation RAMP Test (Varistor Test) IEC 61643-11

Test Voltage	Voltage Range	Resolution	Test Current	Accuracy
500 V	Step Ramp 0 V to 500 V	1 V	1 mA	±(1.5 % + 3 digits)
1000 V	Step Ramp 0 V to 1000 V	1 V	1 mA	±(1.5 % + 3 digits)

Continuity Test (R_{LO})

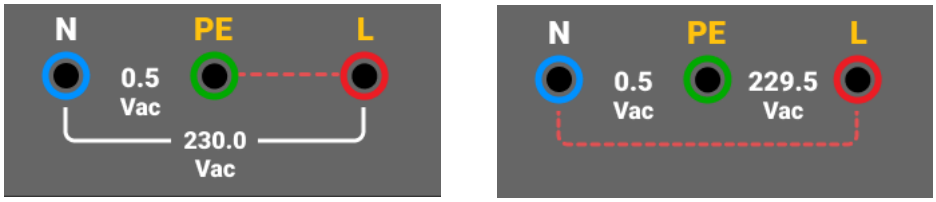
Range (Autoranging)	Resolution	Open Circuit Voltage	Accuracy
20 Ω	0.01 Ω	>4 V	±(1.5 % + 3 digits)[1]
200 Ω	0.1 Ω	>4 V	±(3 % + 3 digits)
2000 Ω	1 Ω	>4 V	±(3 % + 3 digits)
Note: The number of 250 mA @ 1 Ω continuity tests with full-charge battery is >1500.			
[1] For 10 mA, add 3 digits.			

Range Setting	Display Range	Test Current[1]
250 mA	0.2 Ω to 2.0 Ω	250 mA
	2 Ω to 160 Ω	250 mA to 50 mA
	160 Ω to 800 Ω	10 mA
	800 Ω to 2000 Ω	2 mA
10 mA	0 Ω to 800 Ω	10 mA
	800 Ω to 2000 Ω	2 mA
[1] All test currents ±10 %.		

Test Probe Zeroing	Select **ZERO** to zero the test probe. Can subtract up to 3 Ω of lead resistance. Error message for >3 Ω.
Live Circuit Detection	Inhibits test if terminal voltage >10 V ac detected before initiation of test. Does not apply in point-to-point continuous mode.

Mains Wiring Indicator

Icons indicate if L-PE or L-N terminals are reversed.



Loop and RCD tests are inhibited and an error message is generated if the input voltage is not between 100 V and 500 V. The UK Loop and RCD tests are inhibited if the L-PE or the L-N terminals are reversed.

Loop and Line Impedance (Z_l No Trip and Hi Current)

Mains Input Voltage Range	50 V ac to 600 V ac (45 Hz to 66 Hz)
Input Connection (softkey selection)	Loop Impedance: phase-to-earth
	Line Impedance: phase-to-neutral
Limit on Consecutive Tests	Auto-shutdown when the temperature of internal components is too high.
Maximum Test Current @ 600 V	30 A sinusoidal for 10 ms
Maximum Test Current @ 400 V	20 A sinusoidal for 10 ms
Maximum Test Current @ 230 V	12 A sinusoidal for 10 ms

Range Setting	Resolution	Accuracy[1]
10 Ω [2]	0.001 Ω	Hi Current mΩ mode: ±(2 % + 35 digits)
20 Ω	0.01 Ω	No Trip mode: ±(3 % + 6 digits)
		Hi Current mode: ±(2 % + 4 digits)
200 Ω	0.1 Ω	No Trip mode: ±(3 %)
		Hi Current mode: ±(2 %)
2000 Ω	1 Ω	±6 %[3]

[1] Valid for resistance of neutral circuit <20 Ω and up to a system phase angle of 30 °. Test leads must be zeroed before testing.
[2] 1674 FC model only.
[3] Valid for mains voltage >200 V.

Voltage Drop (ΔV)

Measurement Range	Resolution	Accuracy
0.0 % to 99.9 %	0.1 %	Consider accuracy of line impedance measurements.

Prospective Earth Fault Current (PEFC) Prospective Short Circuit Current (PSC)

Computation	Prospective Earth Fault Current (PEFC/I_K) or Prospective Short Circuit Current (PSC/I_K) determined by dividing measured mains voltage by measured loop (L-PE) resistance or line (L-N) resistance, respectively.	
Range	0 kA to 50 kA	
Resolution	**Range**	**Resolution**
	I_K <1000 A	1 A
	I_K ≥1000 A	0.1 kA
Accuracy	Determined by accuracy of loop resistance and mains voltage measurements.	

RCD Tests

RCD Types Tested

Limit on consecutive tests: Automatic shutdown for RCD tests when the temperature of internal components is too high.

RCD Type[1]		1672	1673 FC	1674 FC
AC[2]	G[3]	●	●	●
AC	S[4]	●	●	●
A[5], F[6]	G	●	●	●
A, F	S	●	●	●
B, B+[7]	G		●	●
B, B+	S		●	●
RDC-DD, A/EV, B/Mi[8]	G		●	●
GFCI	G	●	●	●

[1] RCD test inhibited for V >265 ac
RCD tests permitted only if the selected current, multiplied by earthing resistance, is <50 V
[2] AC – Responds to ac
[3] G – General, no delay
[4] S – Time delay
[5] A – Responds to ac and pulsed signal
[6] F – responds to ac, pulsed, and high frequency
[7] B, B+ – Responds to ac, pulsed, high frequency, and smooth dc
[8] RDC-DD, A/EV, B/Mi – Responds to dc residual currents >6 mA

Test Signals

Type	Test Signal Description
RCD type AC (sinusoidal)	The waveform is a sinewave starting at zero crossing, polarity determined by phase selection (0 ° phase starts with low to high zero crossing, 180 ° phase starts with high to low zero crossing). The magnitude of the test current is $I_{\Delta N}$ x Multiplier for all tests.
A (half-wave)	The waveform is a half wave rectified sinewave starting at zero, polarity determined by phase selection (0 ° phase starts with low to high zero crossing, 180 ° phase starts with high to low zero crossing). The magnitude of the test current is 0.7 x $I_{\Delta N}$ (rms) x Multiplier for all tests where the multiplier is x0.5 (x1/2). The magnitude of the test current is 2.0 x $I_{\Delta N}$ (rms) x Multiplier for all tests where both the multiplier is ≥ x1 and $I_{\Delta N}$ = 0.01A. The magnitude of the test current is 1.4 x $I_{\Delta N}$ (rms) x Multiplier for all tests for all other settings.
B (DC)	This is a smooth dc current in accordance to EN61557-6 Annex A

RCD Tripping Indicator

The RCD ✓ symbol switches on as a good test indicator when testing the RCD trip time or RCD trip current if the trip time meets these conditions:

RCD Type	$I_{\Delta N}$	Trip Time Limits
G	x1	<300 ms
S	x1	>130 ms and <500 ms
G	x5	<40 ms
S	x5	>50 ms and <150 ms

RCD Tripping Time ($_{\Delta}$T)

Test Function	RCD Current Selection							
	6 mA	10 mA	30 mA	100 mA[1]	300 mA[1]	500 mA[1]	1000 mA[2]	Var[3]
x ½, 1	●	●	●	●	●	●	●	●
x 5	●	●	●	●				
Ramp	●	●	●	●	●	●	●	●
Auto	●	●	●	●				

Mains voltage 100 V – 265 V ac, 45/66 Hz

[1] Type B RCDs require mains voltage range of 195 V to 265 V.
[2] Type AC RCDs only.
[3] Type A RCDs are limited to 700 mA, not available for Type B RCDs.

Current Multiplier	RCD Type	Measurement Range		Accuracy
		Europe	UK	
x ½	G	310 ms	2000 ms	±(1 % Reading + 1 ms)
x ½	S	510 ms	2000 ms	±(1 % Reading + 1 ms)
x 1	G	310 ms	310 ms	±(1 % Reading + 1 ms)
x 1	S	510 ms	510 ms	±(1 % Reading + 1 ms)
x 5	G	50 ms	50 ms	±(1 % Reading + 1 ms)
x 5	S	160 ms	160 ms	±(1 % Reading + 1 ms)
x 1	RDC-DD, A/EV, B/Mi	10 s	10 s	±(1 % Reading + 1 ms)
350 mA	A	10 ms	10 ms	±(1 % Reading + 1 ms)

[1] G – General, no delay / S – Time delay

RCD Tripping Current ($I_{\Delta N}$) Measurement/Ramp Test

Current Range	Step Size	Dwell Time		Measurement Accuracy
		Type G	Type S	
30 % to 110 % of RCD-rated current[1]	10 % of $I_{\Delta N}$[2]	300 ms/step	500 ms/step	±5 %

[1] Specified trip current ranges (IEC 61008-1):
30 % to 150 % for Type A $I_{\Delta N}$ >10 mA
30 % to 210 % for Type A $I_{\Delta N}$ = 10 mA
20 % to 210 % for Type B
50 % to 100 % for Type AC
35 % to 140 % for Type A (>10 mA)
35 % to 200 % for Type A (≤10 mA)
50 % to 200 % for Type B
[2] 5 % for Type B

Insulation Monitoring Devices (IMD) IEC 61557-8

Range	Resolution	Note
1 kΩ to 10 kΩ	1 kΩ	>1 MΩ only available with voltages >100 V
10 kΩ to 100 kΩ	10 kΩ	
100 kΩ to 3 MΩ	100 kΩ	

Maximum Time[1]	Resolution	Note
600.0 s	0.1 s	Manual timing with TEST button TEST

[1] The maximum test time duration may be reduced due to heat development when low resistance values are used in combination with high voltages.

Phase Sequence Test

Icon	icon. Phase Sequence indicator is active.
Display of Phase Sequence	Displays “1-2-3” in digital display field for correct sequence. Displays “3-2-1” for incorrect phase. Dashes in place of a number indicate a valid determination could not be made.
Mains Input Voltage Range (phase-to-phase)	185 V to 600 V

Earth Resistance Test (R_E)

1673 FC and 1674 FC only

Range	Resolution	Accuracy
200 Ω	0.1 Ω	±(2 % + 5 digits)
2000 Ω	1 Ω	±(3.5 % + 10 digits)

Range: RE + R_{PROBE}[1]	Test Current
2200 Ω	3.5 mA
16 000 Ω	500 µA
52 000 Ω	150 µA
[1] Without external voltages.	

Freqency	Output Voltage
128 Hz	25 V

Live Circuit Detection	Inhibits test if terminal voltage >10 V ac is detected before the start of the test.

Auto Test Sequence

Models 1673 FC and 1674 FC only.

Meets the specifications of the individual tests.

Operating Ranges and Uncertainties (IEC 61557)

The maximum permissible error shows as a percent of reading plus a number of digits when all uncertainty influence factors E1-E10 are counted.

Function	Display Range	IEC 61557 Measurement Range Operating Uncertainty	Nominal Values
V	0.0 V ac to 600 V ac	50 V ac to 600 V ac ±(2 % + 2 digits)	U_N = 230/400 V ac f = 50/60 Hz
R_{LO} IEC 61557-4	0.00 Ω to 2000 Ω	0.2 Ω to 2000 Ω ±(10 % + 2 digits)	4.0 V dc <U_Q <24 V dc R_{LO} ≤2.00 Ω I_N ≥200 mA
R_{ISO} IEC 61557-2	0.00 MΩ to 1000 MΩ	1 MΩ to 200 MΩ ±(10 % + 2 digits) 200 MΩ to 1000 MΩ ±(15 % + 2 digits)	U_N = 50 / 100 / 250 / 500 / 1000 V dc I_N = 1.0 mA
Z_I IEC 61557-3	Z_I (No Trip) 0.00 Ω to 2000 Ω	0.4 Ω to 2000 Ω ±(15 % + 6 digits)	UN = 230/400 V ac f = 50/60 Hz I_K= 0 A to 10.0 kA
	Z_I (Hi Current) 0.00 Ω to 2000 Ω	0.2 Ω to 200 Ω ±(10 % + 4 digits)	
	Z_I (Hi Current, Hi Res) 0 mΩ to 9999 mΩ	100 mΩ to 9999 mΩ ±(8 % + 20 digits)	
	RE 0.00 Ω to 2000 Ω	10 Ω to 1000 Ω ±(10 % + 2 digits)	
ΔT, $I_{\Delta N}$ IEC 61557-6	ΔT 0.0 ms to 2000 ms	25 ms to 2000 ms ±(10 % + 1 digits)	ΔT @ 10 / 30 / 100 / 300 / 500 / 1000 / Var mA
	$I_{\Delta N}$ 3 mA to 550 mA (Var 3 mA to 700 mA)	3 mA to 550 mA ±(10 % + 1 digits)	$I_{\Delta N}$ = 10 / 30 / 100 / 300 / 500 / 1000 / Var mA
R_E IEC 61557-5	0.0 Ω to 2000 Ω	10 Ω to 2000 Ω ±(10 % + 2 digits)	f = 128 Hz
Phase IEC 61557-7	---	---	1 : 2 : 3
IMD IEC 61557-8	0 s to 600 s	---	user-defined manual timer

Operating Uncertainties (IEC 61557)

The Operating Uncertainty shows the maximum permissible uncertainty as a percent of reading when all uncertainty influence factors E1-E10 are counted.

	Volts	R_{LO}[1]	R_{ISO}[2]	Z_I[3]	$_{\Delta}T$[4]	$I_{\Delta N}$[4]	R_E[5]
Intrinsic Uncertainty A	0.80 %	1.50 %	10.00 %	6.00 %	1.00 %	5.00 %	3.50 %

[1] IEC 61557-4
[2] IEC 61557-2
[3] IEC 61557-3
[4] IEC 61557-6
[5] IEC 61557-5

Influence Quantity	Volts	R_{LO}[1]	R_{ISO}[2]	Z_I[3]	$_{\Delta}T$[4]	$I_{\Delta N}$[4]	R_E[5]
E1 Position	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
E2 Supply voltage	0.50 %	3.00 %	3.00 %	3.00 %	3.00 %	2.75 %	2.00 %
E3 Temperature	0.50 %	3.00 %	3.00 %	3.00 %	3.00 %	2.25 %	1.50 %
E4 Series interferences voltage	---	---	---	---	---	---	2.00 %
E5 Resistance of the probes and auxiliary earth electrodes	---	---	---	---	---	---	4.60 %
E6.2 System phase angle	---	---	---	1.00 %	---	---	---
E7 System frequency	0.50 %	---	---	2.50 %	---	---	0.00 %
E8 System voltage	---	---	---	2.50 %	2.50 %	2.50 %	0.00 %
E9 Harmonics	---	---	---	2.50 %	---	---	---
E10 D.C. quantity	---	---	---	2.50 %	---	---	---

[1] IEC 61557-4
[2] IEC 61557-2
[3] IEC 61557-3
[4] IEC 61557-6
[5] IEC 61557-5

Maximum Display Values

The following tables can be used for the determination of maximum or minimum display values considering maximum instrument operating uncertainty per EN61557-1.

Insulation Resistance (RISO)

50 V		100 V		250 V		500 V		1000 V	
Limit Value	**Maximum Display Value**	**Limit Value**	**Maximum Display Value**	**Limit Value**	**Maximum Display Value**	**Limit Value**	**Maximum Display Value**	**Limit Value**	**Maximum Display Value**
1	1.12	1	1.12	1	1.12	1	1.12	1	1.3
2	2.22	2	2.22	2	2.22	2	2.22	2	2.4
3	3.32	3	3.32	3	3.32	3	3.32	3	3.5
4	4.42	4	4.42	4	4.42	4	4.42	4	4.6
5	5.52	5	5.52	5	5.52	5	5.52	5	5.7
6	6.62	6	6.62	6	6.62	6	6.62	6	6.8
7	7.72	7	7.72	7	7.72	7	7.72	7	7.9
8	8.82	8	8.82	8	8.82	8	8.82	8	9.0
9	9.92	9	9.92	9	9.92	9	9.92	9	10.1
10	11.02	10	11.02	10	11.02	10	11.02	10	11.2
20	22.02	20	22.2	20	22.2	20	22.2	20	22.2
30	33.02	30	33.2	30	33.2	30	33.2	30	33.2
40	44.02	40	44.2	40	44.2	40	44.2	40	44.2
45	49.52	50	55.2	50	55.2	50	55.2	50	55.2
		60	66.2	60	66.2	60	66.2	60	66.2
		70	77.2	70	77.2	70	77.2	70	77.2
		80	88.2	80	88.2	80	88.2	80	88.2
		90	99.2	90	99.2	90	99.2	90	99.2
				100	110.2	100	110.2	100	110.2
				180	198.2	200	232	200	232
						300	347	300	347
						400	462	400	462
						430	497	500	577
								600	692
								700	807
								800	922
								850	980

Continuity (RLO)

Limit Value	Maximum Display Value
0.2	0.16
0.3	0.25
0.4	0.34
0.5	0.43
0.6	0.52
0.7	0.61
0.8	0.70
0.9	0.79
1	0.88
2	1.78

Limit Value	Maximum Display Value
3	2.68
4	3.58
5	4.48
6	5.38
7	6.28
8	7.18
9	8.08
10	8.98
20	17.98
30	26.8

Loop Tests (Z_l)

Loop Z_l Hi Current		Loop Z_l No Trip		Loop Z_l Hi Res	
Limit Value	**Maximum Display Value (Ω)**	**Limit Value**	**Maximum Display Value (Ω)**	**Limit Value**	**Maximum Display Value (mΩ)**
0.20	0.14	-	-	0.20	180
0.30	0.23	-	-	0.30	280
0.40	0.32	0.40	0.28	0.40	370
0.50	0.41	0.50	0.37	0.50	460
0.60	0.50	0.60	0.45	0.60	550
0.70	0.59	0.70	0.54	0.70	640
0.80	0.68	0.80	0.62	0.80	740
0.90	0.77	0.90	0.71	0.90	830
1.00	0.86	1.00	0.79	1.00	920
1.10	0.95	1.10	0.88	1.10	1010
1.20	1.04	1.20	0.96	1.20	1100
1.30	1.13	1.30	1.05	1.30	1200
1.40	1.22	1.40	1.13	1.40	1290
1.50	1.31	1.50	1.22	1.50	1380
1.60	1.40	1.60	1.30	1.60	1470
1.70	1.49	1.70	1.39	1.70	1560
1.80	1.58	1.80	1.47	1.80	1660
1.90	1.67	1.90	1.56	1.90	1750
2.00	1.76	2.00	1.64	2.00	1840
3.00	2.66	3.00	2.49	3.00	2760
4.00	3.56	4.00	3.34	4.00	3680
5.00	4.46	5.00	4.19	5.00	4600
10.00	8.96	10.00	8.44	10.00	9200

RCD/FI ($_{\Delta}T$, $I_{\Delta N}$)

RCD/FI Time		RCD/FI Current	
Limit Value	**Maximum Display Value**	**Limit Value**	**Maximum Display Value**
25	22.4	0.5	0.49
30	26.9	0.6	0.49
40	35.9	0.7	0.59
50	44.9	0.8	0.69
60	53.9	0.9	0.79
70	62.9	1	0.89
80	71.9	2	1.79
90	80.9	3	2.69
100	89.9	4	3.59
200	179.9	5	4.49
300	269	6	5.39
400	359	7	6.29
500	449	8	7.19
600	539	9	8.09
700	629	10	8.99
800	719	20	17.99
900	809	30	26.9
1000	899	40	35.9
2000	1799	50	44.9
		60	53.9
		70	62.9
		80	71.9
		90	80.9
		100	89.9
		200	179.9
		300	269.9
		400	359.9
		500	449.9

Earth Tests (R_E)

Limit Value	Maximum Display Value
10	8.8
20	17.8
30	26.8
40	35.8
50	44.8
60	53.8
70	62.8
80	71.8
90	80.8
100	89.8

Limit Value	Maximum Display Value
200	179.8
300	268
400	358
500	448
600	538
700	628
800	718
900	808
1000	898
2000	1798