TECHNICAL DATA

Fluke 753 Documenting Process Calibrator

Key features

- Full-featured documenting process calibrator for calibrating and troubleshooting
- Measures volts, mA, RTDs, thermocouples, frequency, and ohms to test sensors, transmitters and other instruments
- Sources and simulate volts, mA, pressure, thermocouples, RTDs, frequency, ohms, and pressure to calibrate transmitters
- Powers transmitters during test using loop supply with simultaneous mA measurement

Product overview: Fluke 753 Documenting Process Calibrator

Fluke 753 Documenting Process Calibrator helps you work smarter and faster

The Fluke 753 is a powerful multifunction documenting calibrator that lets you download procedures, lists, and instructions created with software, and upload data for printing, archiving, and analysis. You'll find it does the work of several tools, with simultaneous source and measurement capabilities for all common process parameters. It sources, simulates, and measures pressure, temperature, and electrical signals in one rugged, hand-held calibration tool. It also automates calibration procedures, captures data for documentation, and helps you meet rigorous standards like ISO 9000, FDA, EPA, and OSHA regulations.

The 753 includes a USB interface and a USB communication cable to enable two-way communication with DPCTrack 2 and other instrumentation management applications. To create a seamless/paperless calibration management system consider adding Fluke DPCTrack2 Calibration Management software for use with your Fluke 753 and 754 or even legacy

Fluke 743 and 744 calibrators.

Other useful features:

- Measures and sources pressure using any of 50 Fluke 700Pxx Pressure Modules
- Allows you to creates and run automated as-found/as-left procedures to satisfy quality programs or regulations, and record and document results
- Holds up to a full week of downloaded procedures and calibration results
- Offers many flexible features like autostep, custom units, user-entered values during test, one-point and two-point switch testing, square root DP flow testing, programmable measurement delay and more.
- Offers compatibility with DPCTrack2 and many other asset management software packages
- Bright white dual display for reading both sourced and measured parameters simultaneously
- Easy-to-use multi-lingual interface
- Gas gauge and rechargeable Li-Ion battery for 10 hour uninterrupted use
- Comes with three-year warranty and DPC/Track trial software

Specifications: Fluke 753 Documenting Process Calibrator

Measurement Accuracy			
	Range /Resolution	**1 Year**	**2 Years**
Voltage DC	100.000 mV	0.02% + 0.005 mV	0.03% + 0.005 mV
	3.00000 V	0.02% + 0.00005 V	0.03% + 0.00005 V
	30.0000 V	0.02% + 0.0005 V	0.03% + 0.0005 V
	300.00 V	0.05% + 0.05 V	0.07% + 0.05 V
Voltage AC	**3.000 V (40 Hz to 500 Hz) / 0.001 V**	0.5% + 0.002 V	1.0% + 0.004 V
	30.00 V (40 Hz to 500 Hz) / 0.01 V	0.5% + 0.02 V	1.0% + 0.04 V
	300.0 V (40 Hz to 500 Hz) / 0.1 V	0.5% + 0.2 V	1.0% + 0.2 V
Current DC	**30.000 mA**	0.01% + 5 uA	0.015% + 7 uA
	110.00 mA	0.01% + 20 uA	0.015% + 30 uA
Resistance	**10.000 Ω**	0.05% + 50 mΩ	0.07% + 70 mΩ
	100.00 Ω	0.05% + 50 mΩ	0.07% + 70 mΩ
	1.0000 kΩ	0.05% + 500 mΩ	0.07% + 0.5 Ω
	10.000 kΩ	0.1% + 10 Ω	0.15% + 15 Ω
Frequency	**1.00 to 110.00 Hz / 0.01 Hz**		0.05 Hz
	110.1 to 1100.0 Hz / 0.1 Hz		0.5 Hz
	1.101 to 11.000 kHz / 0.001 kHz		0.005 kHz
	11.01 to 50.00 kHz / 0.01 kHz		0.05 kHz

Source Accuracy			
		1 Year	**2 Years**
Voltage DC	**100.000 mV**	0.01% + 0.005 mV	0.015% + 0.005 mV
	1.00000 V	0.01% + 0.00005 V	0.015% + 0.0005 V
	15.0000 V	0.01% + 0.0005 V	0.015% + 0.0005 V
Current DC	**22.000 mA (source)**	0.01% + 0.003 mA	0.02% + 0.003 mA
	Current sink (simulate)	0.02% + 0.007 mA	0.04% + 0.007 mA
Resistance	**10.000 Ω**	0.01% + 10 mΩ	0.015% + 15 mΩ
	100.00 Ω	0.01% + 20 mΩ	0.015% + 30 mΩ
	1.0000 kΩ	0.02% + 0.2 Ω	0.03% + 0.3 Ω
	10.000 kΩ	0.02% + 3 Ω	0.03% + 5 Ω
Frequency	**0.1 to 10.99 Hz**		0.01 Hz
	0.01 to 10.99 Hz		0.01 Hz
	11.00 to 109.99 Hz		0.1 Hz
	110.0 to 1099.9 Hz		0.1 Hz
	1.100 to 21.999 kHz		0.002 kHz
	22.000 to 50.000 kHz		0.005 kHz
Technical Data			
Data log functions	**Measure functions**	Voltage, current, resistance, frequency, temperature, pressure	
	Reading rate	1, 2, 5, 10, 20, 30, or 60 readings/minute	
	Maximum record length	8000 readings (7980 for 30 or 60 readings/minute)	
Ramp functions	**Source functions**	Voltage, current, resistance, frequency, temperature	
	Rate	4 steps/second	
	Trip detect	Continuity or voltage (continuity detection not available when sourcing current)	
Loop power function	**Voltage**	Selectable, 26 V	
	Accuracy	10%, 18 V minimum at 22 mA	
	Maximum current	25 mA, short circuit protected	
	Maximum input voltage	50 V DC	
Step functions	**Source functions**	Voltage, current, resistance, frequency, temperature	
	Manual step	Selectable step, change with arrow buons	
	Autostep	Fully programmable for function, start delay, stepvalue, time per step, repeat	
Environmental Specifications			
Operating temperature	-10°C to +50°C		

Storage temperature	-20°C to +60°C		
Dust/water resistance	Meets IP52, IEC 529		
Operating altitude	3000 m above mean sea level (9842 ft)		
Safety Specifications			
Agency approvals	CAN/CSA C22.2 No 1010.1-92, ASNI/ISA S82.01-1994, UL3111, and EN610-1:1993		
Mechanical and General Specifications			
Size	136 x 245 x 63 mm (5.4 x 9.6 x 2.5 in)		
Weight	1.2 kg (2.7 lb)		
Baeries	Inteal Baery Pack Li-ion: 7.2 V, 4400 mAh, 30 Wh		
Baery life	> 8 hours typical		
Baery replacement	Via snap-shut door without opening calibrator; no tools required		
Side port connections	Pressure module connector		
	USB Connector to interface to your PC		
	Connection for optional baery charger/eliminator		
Data storage capacity	1 week of calibration procedures results		
90 day specifications	The standard specification interval for the 750 Series are 1 and 2 years.		
	Typical 90 day measurement and source accuracy can be estimated by dividing the one year "% of reading" or "% of output" specifications by 2.		
	Floor specifications, expressed as "% of full scale" or "counts" or "ohms" remain constant.		
Temperature, Resistance Temperature Detectors			
Degrees or % of reading - Type (α)	**Range °C**	**Measure °C[1]**	
		1 year	**2 year**
100 Ω Pt (385)	-200 to 100 100 to 800	0.07°C 0.02% + 0.05°C	0.14°C 0.04% + 0.10°C
200 Ω Pt (385)	-200 to 100 100 to 630	0.07°C 0.02% + 0.05°C	0.14°C 0.04% + 0.10°C
500 Ω Pt (385)	-200 to 100 100 to 630	0.07°C 0.02% + 0.05°C	0.14°C 0.04% + 0.10°C
1000 Ω Pt (385)	-200 to 100 100 to 630	0.07°C 0.02% + 0.05°C	0.14°C 0.04% + 0.10°C
100 Ω Pt (3916)	-200 to 100 100 to 630	0.07°C 0.02% + 0.05°C	0.14°C 0.04% + 0.10°C
100 Ω Pt (3926)	-200 to 100 100 to 630	0.08°C 0.02% + 0.06°C	0.16°C 0.04% + 0.12°C
10 Ω Cu (427)	-100 to 260	0.2°C	0.4°C
120 Ω Ni (672)	-80 to 260	0.1°C	0.2°C
Source current	**Source °C**		**Allowable current[2]**

	1 year	2 year	
1 mA	0.05°C 0.0125% + 0.04°C	0.10°C 0.025% + 0.08°C	0.1 mA to 10 mA
500 µA	0.06°C 0.017% + 0.05°C	0.12°C 0.034% + 0.10°C	0.1 mA to 1 mA
250 µA	0.06°C 0.017% + 0.05°C	0.12°C 0.034% + 0.10°C	0.1 mA to 1 mA
150 µA	0.06°C 0.017% + 0.05°C	0.12°C 0.034% + 0.10°C	0.1 mA to 1 mA
1 mA	0.05°C 0.0125% + 0.04°C	0.10°C 0.025% + 0.08°C	0.1 mA to 10 mA
1 mA	0.05°C 0.0125% + 0.04°C	0.10°C 0.025% + 0.08°C	0.1 mA to 10 mA
3 mA	0.2°C	0.4°C	0.1 mA to 10 mA
1 mA	0.04°C	0.08°C	0.1 mA to 10 mA

1. For two and three-wire RTD measurements, add 0.4°C to the specifications.
2. Supports pulsed transmiers and PLCs with pulse times as short as 1 ms

Temperature, Thermocouples

Type	Source °C	Measure °C		Source °C	
		1 year	2 years	1 year	2 years
E	**-250 to -200**	1.3	2.0	0.6	0.9
	-200 to -100	0.5	0.8	0.3	0.4
	-100 to 600	0.3	0.4	0.3	0.4
	600 to 1000	0.4	0.6	0.2	0.3
N	**-200 to -100**	1.0	1.5	0.6	0.9
	-100 to 900	0.5	0.8	0.5	0.8
	900 to 1300	0.6	0.9	0.3	0.4
J	**-210 to -100**	0.6	0.9	0.3	0.4
	-100 to 800	0.3	0.4	0.2	0.3
	800 to 1200	0.5	0.8	0.3	0.3
K	**-200 to -100**	0.7	1.0	0.4	0.6
	-100 to 400	0.3	0.4	0.3	0.4
	400 to 1200	0.5	0.8	0.3	0.4
	1200 to 1372	0.7	1.0	0.3	0.4
T	**-250 to -200**	1.7	2.5	0.9	1.4
	-200 to 0	0.6	0.9	0.4	0.6
	0 to 400	0.3	0.4	0.3	0.4

B	**600 to 800**	1.3	2.0	1.0	1.5
	800 to 1000	1.0	1.5	0.8	1.2
	1000 to 1820	0.9	1.3	0.8	1.2
R	**-20 to 0**	2.3	2.8	1.2	1.8
	0 to 100	1.5	2.2	1.1	1.7
	100 to 1767	1.0	1.5	0.9	1.4
S	**-20 to 0**	2.3	2.8	1.2	1.8
	0 to 200	1.5	2.1	1.1	1.7
	200 to 1400	0.9	1.4	0.9	1.4
	1400 to 1767	1.1	1.7	1.0	1.5
C	**0 to 800**	0.6	0.9	0.6	0.9
	800 to 1200	0.8	1.2	0.7	1.0
	1200 to 1800	1.1	1.6	0.9	1.4
	1800 to 2316	2.0	3.0	1.3	2.0
L	**-200 to -100**	0.6	0.9	0.3	0.4
	-100 to 800	0.3	0.4	0.2	0.3
	800 to 900	0.5	0.8	0.2	0.3
U	**-200 to 0**	0.6	0.9	0.4	0.6
	0 to 600	0.3	0.4	0.3	0.4
BP	**0 to 1000**	1.0	1.5	0.4	0.6
	1000 to 2000	1.6	2.4	0.6	0.9
	2000 to 2500	2.0	3.0	0.8	1.2
XK	**-200 to 300**	0.2	0.3	0.2	0.5
	300 to 800	0.4	0.6	0.3	0.6

Ordering information

Fluke 753

Fluke 753 Documenting Process Calibrator

Includes:

- BC7240 battery charger
- Li-on BP7240 battery pack
- DPCTrack 2™ Sample Software
- Instruction manual
- NIST-traceable calibration report and data
- Three sets of TP220 test probes with three sets of “extended tooth"" alligator clips
- Two sets AC280 hook clips
- C799 Soft Field Case
- USB communication cable

Fluke. *Keeping your world up and running.®*

Fluke Corporation
PO Box 9090, Everett, WA 98206 U.S.A.

For more information call:
In the U.S.A. (800) 443-5853
In Europe/M-East/Africa
+31 (0)40 267 5100
In Canada (800)-36-FLUKE
From other countries +1 (425) 446-5500

BUT. FLUKE SOUTH EAST ASIA PTE LTD
Menera Satu Sentra Kelapa Gading #06-05
JI. Bulevar Kelapa Gading Kav. LA# No. 1
Summarecon Kelapa Gading
Jakarta Utara 14240
Indonesia
Tel: +62 21 2938 5922
Email: info.asean@fluke.com
www.fluke.com/id-en

04/2025