

TECHNICAL DATA

Fluke 3540 FC Three-Phase Power Monitor and Condition Monitoring Kit



One year software subscription included



Key features

- Measures:
 - Single, split, or three phase loads
 - Voltage, current, and frequency
 - Active power, non-active power, and power factor
 - Total harmonic distortion
- Wireless data collection or internal memory sufficient for 1 week with 1 second data intervals
- Remotely monitor real-time and historical power variable data
- Visualize data with software trending, graphing, and timeboxing
- Auto-generated alarms when power variables deviate from pre-set thresholds
- Power options: Battery, power supply, or power from the measurement line
- Size: (W x H x D) 7.8 in. x 6.6 in. x 2.2 in.
- IP Rating: IP 50; IEC 60529

Product overview: Fluke 3540 FC Three-Phase Power Monitor and Condition Monitoring Kit

The Fluke 3540 FC monitors equipment for changes in key electrical variables. Current, voltage, frequency, and energy consumption fluctuate when machinery experiences excess load. Screen assets for performance or premature wear using the non-invasive 3540 FC.

- Portable device offers scalable, remote power monitoring solution

- View power measurements from a safe distance
- Wirelessly collect real-time power values
- Make data-driven decisions

See "Model" tab for kit options.

Specifications: Fluke 3540 FC Three-Phase Power Monitor and Condition Monitoring Kit

General specifications		
Color LCD display	4.3-inch active matrix color TFT, 480 pixels x 272 pixels, resistive touch panel	
Warranty	3540 FC and built-in power supply	2 years (battery not included)
	Accessories	1 year
Calibration cycle	2 years	
Dimensions (WxHxD)	3540 FC	19.8 x 16.7 x 5.5 cm (7.8 x 6.6 x 2.2 in)
	Detachable power supply	13.0 x 13.0 x 4.5 cm (5.1 x 5.1 x 1.8 in)
	3540 FC with power supply attached	19.8 cm x 16.7 x 9 cm (7.8 x 6.6 x 4.0 in)
Weight	3540 FC	1.1kg (2.5 lb)
	Power supply	
Tamper protection	Kensington lock	
Environmental specifications		
Operating temperature	0 °C to +45 °C (+32 °F to +113 °F)	
Storage temperature	<20 °C to +60 °C (-4 °C to +140 °F), with battery: -20 °C to +50 °C (-4 °F to +122 °F)	
Operating humidity	<10 °C (<50 °F) non condensing	
	+10 °C to +30 °C (+50 °F to +86 °F) ≤95 %	
	+30 °C to +40 °C (+86 °F to +104 °F) ≤75 %	
	+40 °C to +45 °C (+104 °F to +113 °F) ≤45 %	
Operating altitude	2000 m (6,500 ft) (up to 4,000 m derate to 1000 V CAT II/600 V CAT III/300 V CAT IV)	
Storage altitude	12,000 m (39,000 ft)	
IP Rating	IEC 60529:IP50, in connected condition with protection caps in place	
Vibration	MIL-T-28800E, Type 3, Class III, Style B	
Safety		
IEC 61010-1	IEC mains input	Overvoltage Category II, Pollution Degree 2
	Voltage terminals	Overvoltage Category IV, Pollution Degree 2
Electromagnetic compatibility (EMC)		
International	IEC 61326-1: Industrial	
Korea (KCC)	Class A Equipment (Industrial Broadcasting & Communication Equipment)	

USA (FCC)	47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.	
Wireless radio with adapter		
Frequency range	2412 MHz to 2462 MHz	
Output power	<100 mW	
Electrical specifications		
Single and three-phase topologies		
Wiring configurations	1- Φ , 1- Φ IT, Split-phase, 3- Φ wye, 3- Φ wye IT, 3- Φ wye balanced, 3- Φ delta, 3- Φ Aron/Blondel (2-element delta), 3- Φ delta open leg, 3- Φ high leg delta, 3- Φ delta balanced. Currents only (load studies)	
Voltage inputs		
Number of inputs	4 (3 phases and neutral)	
Maximum input voltage	1000 Vrms (1700 Vpk) phase to neutral	
Input impedance	10 M Ω each phase to neutral	
Bandwidth	42.5 Hz to 3.5 kHz	
Scaling	1:1, variable	
Current inputs		
Number of inputs	3, mode selected automatically for attached sensor	
Current sensor output voltage	Clamp	500 mVrms / 50 mVrms; CF 2.8
	Rogowski coil	150 mVrms/15 mVrms at 50 Hz, 180 mVrms/18 mVrms at 60 Hz; CF 4; all at nominal probe range
Bandwidth (-3 dB)	42.5 Hz to 3.5 kHz	
Scaling	1:1 and variable	
Data acquisition		
Resolution	16-bit synchronous sampling	
Sampling frequency	10.24 kHz at 50/60Hz, synchronized to mains frequency	
Input signal frequency	Mains 50/60 Hz (42.5 to 69 Hz)	
Data storage	Internal flash memory (not user replaceable)	
Memory size	Typical 1 offline logging session of 1 week with 1 second intervals. The number of possible logging sessions and logging period depends on user requirements.	
Measured parameters	Voltage, current, frequency, THD V, THD A, power, power factor, fundamental power, DPF	
Averaging interval	1 s	
Total harmonic distortion	THD for voltage and current is calculated on 25 harmonics	
Calculated min/max values times		
Voltage	Full cycle RMS (20 ms at 50 Hz, 16.7 ms at 60 Hz)	
Current	Half cycle RMS (10 ms at 50 Hz, 8.3 ms at 60 Hz)	
Power	200 ms	

Interfaces	
USB-A	Firmware updates, max. supply current: 120 mA
WiFi	
Supported modes	Direct connection and connection to infrastructure
Security	WPA2-AES with pre-shared key
Power supply	
Voltage range	Nominal 100 V to 500 V (85 V min to 550 V max) using safety plug input
Mains power	Nominal 100 V to 240 V (85 V min to 265 V max) using IEC 60320 C7 input
Power consumption	Maximum 50 VA (max. 15 VA when powered using IEC 60320 input)
Standby power	<0.3 W only when powered using IEC 60320 input
Efficiency	≥68.2 % (in accordance with energy efficiency regulations)
Mains frequency	50/60 Hz ±15 %
Battery power	Li-ion 3.7 V, 9.25 Wh, customer-replaceable
On-battery runtime	Up to 4 hr (up to 5.5 hr in energy saving mode)
Charging time	<6 hr

Ordering information



FLUKE 3540 FC KIT

Fluke 3540 FC Three-Phase Power Monitor and Condition Monitoring Kit

Includes:

- 1 Fluke 3540 FC Three-Phase Power Monitor
- Voltage Test Lead, 3-phase + N
- 4x Dolphin Clips, Black
- 3x i173x-flex1500 iFlex Current Probe, 30.5 cm (12 in)
- Set of color-coded Wire Clips
- Mains Power Cable
- Set of 2 test leads with stackable plugs, 10 cm (3.9 in)
- Set of 2 test leads with stackable plugs, 1.5 m (6.6 ft)
- DC Power Cable
- Input Connector Decal (see Figure 5)
- WiFi to USB Adapter
- Magnet Hanger Kit

Purchase comes with 1-year of Fluke Connect Condition Monitoring software.



Preventive maintenance simplified. Rework eliminated.

Save time and improve the reliability of your maintenance data by wirelessly syncing measurements using the Fluke Connect™ system.

- Eliminate data-entry errors by saving measurements directly from the tool and associating them with the work order, report or asset record.
- Maximize uptime and make confident maintenance decisions with data you can trust and trace.
- Access baseline, historical and current measurements by asset.
- Move away from clipboards, notebooks and multiple spreadsheets with a wireless one-step measurement transfer.
- Share your measurement data using ShareLive™ video calls and emails.

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Smart phone wireless service and data plan not included with purchase. Fluke Connect is not available in all countries.

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