

Digital Multimeter Selection Guide

HOW TO SELECT A DIGITAL MULTIMETER

Choosing the correct digital multimeter (DMM) involves evaluating your basic measurement needs. DMMs come with many special features that make it easy for you to perform basic measurements as well as more advanced troubleshooting. Listed here are some of the factors to consider when selecting a meter.

WORK ENVIRONMENT

- Determine the applications and types of measurements you most commonly work with (and the voltage levels and current ranges associated with them)
- Remember that measuring high currents (10A or more) requires that a current clamp accessory be used with your DMM

Specialty Features

Based on your needs, many DMMs have a variety of other functions, including capacitance, frequency, temperature, noncontact voltage, low-impedance mode, min./max. recording, and data logging.

Safety

What safety needs do your applications have? Most commercial/industrial measurements fall into a CAT III or CAT IV rating.

Item No.	P/N	Page	AC Volt	DC Volt	AC Current	DC Current	TRMS	Auto Range	Temp.	Capacitance	Freq.	Data Logging	Special Features*	Safety Rating
1WKN8	Amprobe 5XP-A	622	750	1000	200m	200m	—	—	—	—	—	—	BT/NCVD	CAT III 300V/CAT II 600V
1WKN9	Amprobe 15XP-A	622	750	1000	2	2	—	●	—	—	—	—	TTL/NCVD	CAT III 300V/CAT II 600V
1WKP2	Amprobe 30XR-A	622	600	600	10	10	—	—	—	—	—	—	NCVD	CAT III 300V/CAT II 600V
1WKP3	Amprobe 33XR-A	622	750	1000	10	10	—	—	●	●	●	—	—	CAT III 300V/CAT II 600V
1WKP4	Amprobe 34XR-A	622	750	1000	10	10	●	●	●	●	●	—	—	CAT III 300V/CAT II 600V
1WKP1	Amprobe 35XP-A	622	750	1000	2	2	—	—	●	●	●	—	NCVD	CAT III 300V/CAT II 600V
1WKP5	Amprobe 37XR-A	622	750	1000	10	10	●	●	—	●	●	—	TTL	CAT III 300V/CAT II 600V
1WKP6	Amprobe 38XR-A	622	750	1000	10	10	●	●	●	●	●	—	—	CAT IV 600V/CAT III 1000V
2AVA4	Amprobe AM-140 TRMS	622	1000	1000	10	10	—	●	●	●	●	—	—	CAT IV 600V/CAT III 1000V
2AVA3	Amprobe AM-150 TRMS	622	1000	1000	10	10	●	●	●	●	●	—	—	CAT IV 600V/CAT III 1000V
2ATA5	Amprobe AM-160 TRMS	622	1000	1000	10	10	●	●	●	●	●	—	—	CAT IV 600V/CAT III 1000V
2AVA1	Amprobe AM-220	626	600	600	10	10	—	●	—	●	●	—	—	CAT III 600V
2AVA2	Amprobe AM-240	626	600	600	10	10	—	●	●	●	●	—	—	CAT III 600V
1WKN1	Amprobe DM7C	626	600	600	—	200m	—	—	—	—	—	—	—	CAT II 600V
1WKN2	Amprobe DM9C	626	600	600	400m	400m	—	●	—	—	—	—	—	CAT II 600V
1WKN7	Amprobe DM73C	627	600	600	—	—	—	●	—	—	—	—	Probe	—
2MVU4	Amprobe DM78C	627	600	600	—	—	—	—	—	—	—	—	CC	CAT III 300V/CAT II 600V
2ATA6	Amprobe HD110C	624	1000	1500	2	2	—	—	—	—	—	—	WP	CAT IV 1000V
2ATA7	Amprobe HD160C	624	1000	1500	2	2	—	—	—	—	—	—	WP	CAT IV 1000V
1WKN3	Amprobe PM51A	627	600	600	—	—	—	—	—	—	—	—	CC	CAT III 600V/CAT III 1000V
1WKN4	Amprobe PM53A	627	600	600	—	—	—	—	—	—	—	—	NCVD	CAT III 600V/CAT II 1000V
1WKN5	Amprobe PM55A	627	600	600	2000μ	2000μ	—	—	—	—	—	—	NCVD	CAT III 600V/CAT II 1000V
2GMK1	Dranetz M230	624	600	600	100m	100m	●	●	—	—	●	●	mOhm	CAT II 600V
2GMK7	Dranetz M240	624	1000	1000	10	10	●	●	●	●	●	●	ABS/LC	CAT IV 600V/CAT III 1000V
2GMK4	Dranetz M243	624	1000	1000	10	10	●	●	●	●	●	—	ABS/LC	CAT IV 600V/CAT III 1000V
1PTL1	Extech 381676	627	600	600	—	—	—	—	—	—	—	—	NCVD/Probe	CAT III 300V
1PTL2	Extech DM220	627	600	600	200m	200m	—	—	—	●	●	—	NCVD/FL	CAT IV 600V
1PTK4	Extech EX310	625	600	600	10	10	—	—	—	—	—	—	NCVD	CAT III 600V/CAT II 1000V
1PTK5	Extech EX320	625	600	600	10	10	—	—	—	—	—	—	NCVD	CAT III 600V/CAT II 1000V
1PTK6	Extech EX330	625	600	600	10	10	—	●	●	●	●	—	NCVD	CAT III 600V/CAT II 1000V
1GUG7	Extech EX410	622	750	1000	20	20	—	—	●	—	—	—	—	CAT III 600V/CAT II 1000V
1GUG8	Extech EX411	622	750	1000	20	20	●	—	—	—	—	—	—	CAT III 600V/CAT II 1000V
1GUG9	Extech EX430	622	750	1000	20	20	●	●	●	●	●	—	—	CAT III 600V/CAT II 1000V
1GUH1	Extech EX470	622	750	1000	20	20	●	●	●	●	●	—	IR Temp.	CAT III 600V/CAT II 1000V
1PTK1	Extech EX503	623	1000	1000	10	10	—	●	—	●	●	—	WP	CAT IV 600V
1PTK3	Extech EX505	623	1000	1000	10	10	—	●	—	●	●	—	WP	CAT IV 600V
2ELP6	Extech EX520	623	1000	1000	20	20	●	●	●	●	●	—	WP	CAT IV 600V
2ELP7	Extech EX530	623	1000	1000	20	20	●	●	●	●	●	—	WP	CAT IV 600V
1PTK8	Extech MN15	626	600	600	—	10	—	—	●	—	—	—	BT	CAT II 600V
1PTK9	Extech MN16	626	600	600	10	10	—	—	●	—	—	—	—	CAT II 600V
2A426	Fluke 27	624	1000	1000	10	10	—	●	—	—	—	—	WP	CAT III 1000V
1TFV1	Fluke 77-IV	623	1000	1000	10	10	—	●	—	●	●	—	—	CAT IV 600V/CAT III 1000V
4EB17	Fluke 83-V	623	1000	1000	10	10	—	●	—	●	●	—	—	CAT IV 600V/CAT III 1000V
4EB18	Fluke 87-V	623	1000	1000	10	10	—	●	—	●	●	—	MD	CAT IV 600V/CAT III 1000V
2WTJ7	Fluke 87-V EX	623	1000	1000	10	10	—	●	—	●	●	—	INT	CAT IV 600V/CAT III 1000V
2VGA1	Fluke 113	625	600	600	—	—	—	●	—	—	—	—	LIM	CAT IV 300V/CAT III 600V
1GAH8	Fluke 114	625	600	600	—	—	—	●	—	—	—	—	LIM	CAT III 600V
1GAH9	Fluke 115	625	600	600	10	10	—	●	—	—	—	—	—	CAT III 600V
1GAJ1	Fluke 116	625	600	600	600μ	600μ	●	●	●	●	●	—	LC/LIM/AV	CAT III 600V
1GAJ2	Fluke 117	625	600	600	10	10	●	●	—	—	—	—	NCVD	CAT III 600V
6MR05	Fluke 175	623	1000	1000	10	10	—	—	—	—	—	—	—	CAT IV 600V/CAT III 1000V
6MR07	Fluke 177	623	1000	1000	10	10	—	—	—	—	—	—	—	CAT IV 600V/CAT III 1000V
6MR09	Fluke 179	623	1000	1000	10	10	—	—	—	—	—	—	—	CAT IV 600V/CAT III 1000V
1EVC6	Fluke 287	624	1000	1000	10	10	●	●	●	●	●	—	—	CAT IV 600V/CAT III 1000V
1EVC3	Fluke 289	624	1000	1000	10	10	●	●	●	●	●	—	LIM/MD	CAT IV 600V/CAT III 1000V

(*) Special Features: ABS = Automatic Blocking Sockets; AV = Automatic AC/DC Voltage Selection; BT = Battery Tester; CC = Credit Card Size; FL = Built-in Flashlight; INT = Intrinsically Safe; IR Temp. = Built-in IR Thermometer; LC = Low Current uA Range; LIM = Low Impedance Mode; MD = Adjustable Motor Drive Mode; mOhm = Milliohm Range; NCVD = Noncontact Voltage Detection; Probe = Probe Type Meter; TTL = TTL Logic Test; WP = Water Proof

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