Milwaukee®

Nothing but **HEAVY DUTY.**®

DESIGNED TO A
HIGHER STANDARD
TEST INSTRUMENTS CATALOG

MILWAUKEE® TEST INSTRUMENTS

When it comes to test instruments, there isn't an expert out there who knows what works better than you. Milwaukee® has a proven track record of getting out in the field to understand the demands of a constantly changing workplace. By working with our users, we're designing instruments that make you more productive and help you be the best at what you do.

DESIGNED TO A HIGHER STANDARD

Milwaukee® offers a comprehensive line of Test and Measurement tools built specifically for you. Everything from our high-contrast white on black displays, to our built-in work light and voltage detection, to our rugged over-molding is designed to make your job easier. Milwaukee® also offers a rechargeable system for test instruments, powered by our M12™ REDLITHIUM™ battery.
Built to last, Milwaukee® Test and Measurement tools are backed by the Milwaukee® 5 Year Warranty.

BY THE TRADE
FOR THE TRADE

Table of Contents

INCREASED PRODUCTIVITY

Carry Fewer Tools

Built-in LED Light

Built-in Voltage Detector

Easy to Use

Easy-to-Read White on Black Display

Trade-Specific Feature Sets

Built Tough

Rugged Over-Molding

5 Year Warranty

BEST IN CLASS DURABILITY AND SAFETY

UL® TruRMS METERS 5 YEAR WARRANTY NIST

Ingress Protection Ratings
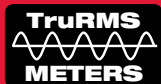
Protection Against Dust

Totally protected against dust	**6**
Protected against dust (No harmful deposit)	**5**
Protected against objects over 1mm (Tools / Small Wire)	**4**
Protected against objects over 2.5mm (Tools / Wire)	**3**
Protected against objects over 12mm (Fingers)	**2**
Protected against objects over 50mm (Hands)	**1**
No protection	**O**

Milwaukee®

Protection Against Moisture

5	Protected against low pressure jets of water from all directions (Limited ingress permitted)
4	Protected against water sprayed from all directions (Limited ingress permitted)
3	Protection against sprays to 60° from the vertical
2	Protection against direct sprays of water up to 15° from the vertical
1	Protection against vertically falling drops of water
O	No protection

Milwaukee®

OUTSTANDING VALUE

MILWAUKEE® SOLUTION

TOTAL INVESTMENT
$229^{00}

COMPETITIVE SOLUTION

$292^{00} +$34^{05} +$35^{15}

TOTAL INVESTMENT
$361^{20}

MILWAUKEE® SOLUTION

TOTAL INVESTMENT
$448^{00}

COMPETITIVE SOLUTION

$463^{75} +$84^{95} +$35^{15}

TOTAL INVESTMENT
$583^{85}

Nothing but HEAVY DUTY.®

M12™ 160x120 Thermal Imager

2260-21
NIST #: 2260-21NST

SPECIFICATIONS

Thermal Resolution	160 x 120 Pixels
Temperature Range	14°F to 662°F (-10°C to 350°C)
Software	YES
Thermal / Visual Display	Thermal or Visual, Toggle Dedicated Key
Removable Battery	YES
Battery Charge Time	30 minutes
Battery Life	> 4 Hours
Storage Size / Type	2GB SD Card
LED Flashlight	YES
Tool Warranty	5 Year
Includes	2260-21 M12™ 160x120 Thermal Imager, 48-11-2401 M12™ REDLITHIUM™ Battery, 48-59-2401 M12™ Lithium-ion Battery Charger, 2GB SD Card, SD Card Reader, Thermal Imager Manual, Thermal Imager Report Software, USB Cable, Carrying Case, Quick Reference Guide, Manual

Broader temperature range (-10°C to 350°C) to cover more applications

Rugged over-molding protects the large LCD and camera lenses if dropped

Crisp, high resolution 160 x 120 pixel thermal images

Simple screen layout allows you to focus on getting the best images

Built-in visual camera and flashlight for improved analysis

Rugged over-molding for increased durability and grip

Capture thermal and visual images on each trigger pull for enhanced reporting

Ergonomic pistol grip design for ease of use

Rechargeable REDLITHIUM™ battery pack provides 4 hours of continuous run-time

DESIGNED TO A HIGHER STANDARD

FASTER

- Toggle button easily switches the LCD between a thermal and visual image
- PC software allows you to quickly analyze images and rapidly create reports

MORE VERSATILE

- Broad temperature range (14°F to 662°F) to cover more applications
- Crisp, high resolution 160 x 120 pixel Thermal images for better definition and clarity
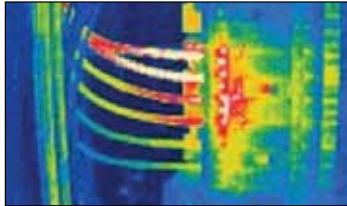
EASIER TO USE

- Intuitive key pad layout is perfect even for infrequent users
- All thermal and visual images saved in standard JPEG format for use in any program

JPEG
FILE FORMAT
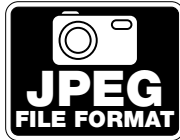
To request your own in-person demonstration or for more information:

- Visit milwaukeetool.com/thermal-imaging
- Call 855-653-8665
- Or scan this QR code

![Milwaukee - Nothing but HEAVY DUTY.®]

Fork Meter
2205-20
NIST #: 2205-20NST

Large jaw opening of 0.63"

Built-in LED work light lights the work area

Built-in non-contact voltage detector

Simplified user interface and feature set specifically tailored for the electrician

Side-mounted dial for one-handed use

High-contrast, easy-to-read display provides clearer readings

Rugged over-molding for increased durability and grip

AA batteries included

Test lead inputs

SPECIFICATIONS
ELECTRICAL

Current AC	200A
Fork Opening	0.63"
TRMS	YES
Safety Rating	CAT IV 600V / CAT III 1000V
Voltage AC/DC	1000V
Lo-Z Measurement	YES
Resistance	40 MOhm
Continuity	Audible
Display Backlight	YES
Display Type	White on Black LCD
Non-contact Voltage	YES
LED Work Light	YES
Rugged Over-Molding	YES
Warranty	5 Years
Includes	Fork Meter, (1) Test Lead Set, (2) AA Batteries, Manual

c(UL)us   TruRMS METERS   NIST

CAT IV 600 V   CAT III 1000 V   5 YEAR WARRANTY
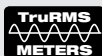
Fork Meter for HVAC/R

2206-20
NIST #: 2206-20NST

SPECIFICATIONS
HVAC

Current AC	200A
Fork Opening	0.63"
TRMS	YES
Safety Rating	CAT IV 600V / CAT III 1000V
Microamps DC	1,000μA
Voltage AC/DC	1000V
Resistance	40 MOhm
Continuity	Audible
Capacitance	1,000μF
Contact Temperature	-40°F to 752°F (-40°C to 400°C)
Display Backlight	YES
Display Type	White on Black LCD
Non-contact Voltage	YES
LED Work Light	YES
Rugged Over-Molding	YES
Warranty	5 Years
Includes	Fork Meter for HVAC/R, (1) Test Lead Set, (1) Thermocouple (Dual Banana), (2) AA Batteries, Manual

cULus

TruRMS METERS

NIST

CAT IV 600 V

CAT III 1000 V

5 YEAR WARRANTY

Large jaw opening of 0.63"

Built-in LED work light lights the work area

Built-in non-contact voltage detector

Simplified user interface and feature set specifically tailored for the HVAC technician

Side-mounted dial for one-handed use

High-contrast, easy-to-read display provides clearer readings

Rugged over-molding for increased durability and grip

AA batteries included

Test lead inputs
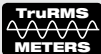
Milliamp Clamp Meter

2231-20
NIST #: 2231-20NST

SPECIFICATIONS
ELECTRICAL

Milliamp DC Range	0 to 99
4-20mA Resolution	0.01mA
Max Conductor Size	0.23"
Clamp Wire Length	3.5"
Display Type	High-Contrast White on Black
LED Work Light	YES
Rugged Over-Molding	YES
Warranty	5 Years
Includes	Milliamp Clamp Meter, carrying case, (2) AA Batteries, Manual

Secure storage pocket protects clamp when not in use

High-contrast resolution white on black display for easy viewing in all lighting conditions

Long clamp wire makes measuring easier

Narrow jaw profile for easily clamping around wires in tight spaces

400 Amp Clamp Meter

2235-20
NIST #: 2235-20NST

SPECIFICATIONS
ELECTRICAL

TRMS	YES
Jaw Size	1"
Safety Rating	CAT III 600V
Current AC	400A
Voltage AC/DC	600V
Resistance	400 ohm
Continuity	Audible
HOLD	YES
Display Backlight	YES
Display Type	Standard LCD
LED Work Light	YES
Rugged Over-Molding	YES
Warranty	5 Years
Includes	400 Amp Clamp Meter, (1) Test Lead Set, (2) AA Batteries, Manual

Large jaw opening easily handles wire bundles

Simplified user interface and feature set specifically tailored to the electrician

AA batteries included

Thin jaw profile for access to tight spaces

Built-in LED work light lights the work area

Side-mounted dial for one-handed use

Rugged over-molding for increased durability and grip

Test lead inputs
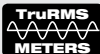
![Milwaukee - Nothing but HEAVY DUTY.®]

Clamp Meter
2237-20
NIST #: 2237-20NST

SPECIFICATIONS
ELECTRICAL

Jaw Size	1.3"
TRMS	YES
Safety Rating	CAT III 600V
Current AC/DC	600A
Voltage AC/DC	600V
Frequency	10 kHz
Resistance	6 kOhms
Continuity	Audible
Capacitance	4000µF
Display Backlight	YES
Display Type	White on Black LCD
Non-contact Voltage	YES
LED Work Light	YES
Rugged Over-Molding	YES
Warranty	5 Years
Includes	Clamp Meter, (1) Test Lead Set, (2) AA Batteries, Manual
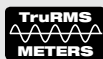
Large jaw opening easily handles wire bundles

Built-in non-contact voltage detector

Simplified user interface and feature set specifically tailored to the electrician

High-contrast, easy-to-read display provides clearer readings

AA batteries included

Thin jaw profile for access to tight spaces

Built-in LED work light lights the work area

Side-mounted dial for one-handed use

Rugged over-molding for increased durability and grip

Test lead inputs

Clamp Meter for HVAC/R

2236-20
NIST #: 2236-20NST

SPECIFICATIONS
HVAC

Jaw Size	1.3"
TRMS	YES
Safety Rating	CAT III 600V
Current AC	600A
Microamps DC	600µA
Voltage AC/DC	600V
Resistance	6 kOhms
Continuity	Audible
Capacitance	4000µF
Contact Temperature	-40°F to 752°F (-40°C to 400°C)
Display Backlight	YES
Display Type	White on Black LCD
Non-contact Voltage	YES
LED Work Light	YES
Rugged Over-Molding	YES
Warranty	5 years
Includes	Clamp Meter for HVAC/R, (1) Test Lead Set, (1) Thermocouple (Dual Banana), (2) AA Batteries, Manual

Large jaw opening easily handles wire bundles

Built-in non-contact voltage detector

Simplified user interface and feature set for the HVAC technician

High-contrast, easy-to-read display provides clearer readings

AA batteries included

Thin jaw profile for access to tight spaces

Built-in LED work light lights the work area

Side-mounted dial for one-handed use

Rugged over-molding for increased durability and grip

Test lead inputs

Digital Multimeter
2216-20
NIST #: 2216-20NST

SPECIFICATIONS

TRMS	YES
Safety Rating	CAT III 600V
Voltage AC	6.00mV – 600V
Voltage DC	600.0mV – 600V
Frequency	2.00 Hz – 50.00 kHz
Resistance	40 MOhm
Continuity	Audible
Capacitance	1000µF
Current AC/DC	10.00A
Display Backlight	YES
Display Type	Standard LCD
HOLD / MIN / MAX	YES
Bargraph	YES
Rugged Over-Molding	YES
Accessory Attachment	Magnetic Meter Holder
Warranty	5 Years
Includes	Digital Multimeter, (1) Test Lead Set, (2) AA Batteries, Manual

Slide rail for mounting accessories

High-contrast, easy-to-read display provides clearer readings

Side-mounted dial for one-handed use

Simplified user interface and feature set for the electrician and the HVAC technician

Rugged over-molding for increased durability and grip

AA batteries included

Magnetic Meter Holder
49-77-3001

Digital Multimeter

2217-20
NIST #: 2217-20NST

SPECIFICATIONS

TRMS	YES
Safety Rating	CAT III 600V
Voltage AC	6.00mV – 600V
Voltage DC	600.0mV – 600V
Lo-Z Measurement	YES
Frequency	10 Hz – 50.00 kHz
Resistance	40 MOhm
Continuity	Audible
Capacitance	1000µF
Current AC/DC	10.00A
Contact Temperature	-40°F to 752°F (-40°C to 400°C)
Display Backlight	YES
Display Type	White on Black LCD
HOLD / MIN / MAX	YES
Bargraph	YES
Rugged Over-Molding	YES
Accessory Attachment	Magnetic Meter Holder
Warranty	5 Years
Includes	Digital Multimeter, (1) Test Lead Set, (1) Thermocouple (Dual Banana), (2) AA Batteries, Manual

Slide rail for mounting accessories

White on black high-contrast, easy-to-read display provides clearer readings

Side-mounted dial for one-handed use

Simplified user interface and feature set for the electrician and the HVAC technician

Rugged over-molding for increased durability and grip

AA batteries included

Magnetic Meter Holder
49-77-3001

Nothing but **HEAVY DUTY.**®

Electrical Combo Kit
2220-20

Includes

2217-20 Digital Multimeter, 2202-20 Voltage Detector with LED, 48-22-1901 FASTBACK™ Utility Knife, 48-22-2114 11IN1 Screwdriver, 49-77-3001 Magnetic Meter Holder, 48-55-0175 Meter Case, Electrical Test Lead Set, Dual Banana Thermocouple, Batteries Included

Digital Multimeter
2217-20
See page 17 for more information

Voltage Detector with LED
2202-20
See page 19 for more information

Easy blade change

Up to 3X faster blade opening

Gut hook for cutting while closed

11IN1 screwdriver with patented ECX™ bit

Can bend up to 12 gauge wire

Can strip up to 12 gauge wire

LIMITED LIFETIME WARRANTY

LIMITED LIFETIME WARRANTY

FASTBACK™ Utility Knife
48-22-1901

11IN1 Screwdriver
48-22-2114

Voltage Detector with LED
2202-20

SPECIFICATIONS

Voltage Range	50 to 1000V AC
Safety Range	CAT IV 1000V
Audible Indicator	YES
Green "ON" Indicator	YES
On / Off Button	YES
LED Work Light	YES
Battery	2 AAA
Warranty	1 year
Includes	Voltage Detector with LED, (2) AAA Batteries

c (UL) us | CAT IV 1000 V | 1 YEAR WARRANTY

Voltage Detector
2200-20

SPECIFICATIONS

Voltage Range	50 to 1000V AC
Safety Range	CAT IV 1000V
Audible Indicator	YES
Green "ON" Indicator	YES
On / Off Button	YES
Battery	2 AAA
Warranty	1 year
Includes	Voltage Detector, (2) AAA Batteries

c (UL) us | CAT IV 1000 V | 1 YEAR WARRANTY

Tip for checking outlets

Built-in LED light
(2202-20 only)

Green light indicates tool is on

Blinking red light indicates voltage

Loud beeper indicates voltage

Pocket clip for easy storage

On / Off button

![Milwaukee - Nothing but HEAVY DUTY.®]

LASER TEMP-GUN™
Thermometer
2265-20
NIST #: 2265-20NST

SPECIFICATIONS

Temperature Range	-22°F to 662°F (-30°C to 350°C)
Distance to Spot Ratio	10 to 1
Basic Accuracy	1.50%
Repeatability	0.50%
Display Resolution	0.1°F (0.1°C)
Response Time	<500 mS
Emissivity	0.95
HOLD / MAX	YES
Display Backlight	YES
Display Type	Standard LCD
ALARM (HI / LO)	YES
Rugged Over-Molding	YES
Warranty	5 Years
Includes	LASER TEMP-GUN™, (3) AA Batteries, Manual

NIST

5 YEAR WARRANTY

10:1 distance to spot ratio measures a 1' spot from 10' away

Rugged over-molding for increased durability and grip

AA batteries included

LASER TEMP-GUN™
Thermometer
2266-20
NIST #: 2266-20NST

SPECIFICATIONS

Temperature Range	-22°F to 932°F (-30°C to 500°C)
Distance to Spot Ratio	12 to 1
Basic Accuracy	1.50%
Contact Temperature Input	-22°F to 842°F (-30°C to 450°C)
Repeatability	0.50%
Display Resolution	0.1°F (0.1°C)
Response Time	<500 mS
Emissivity	0.95
HOLD / MAX	YES
Display Backlight	YES
Display Type	White on Black LCD
ALARM (HI / LO)	YES
Rugged Over-Molding	YES
Warranty	5 Years
Includes	LASER TEMP-GUN™, (3) AA Batteries, Manual

Thermocouple input for contact temperature measurement

12:1 distance to spot ratio measures a 1' spot from 12' away

High-contrast, easy-to-read display provides clearer readings

Rugged over-molding for increased durability and grip

AA batteries included

![Milwaukee - Nothing but HEAVY DUTY.®]

LASER TEMP-GUN™
M12™ Cordless Thermometer

2276-21
NIST #: 2276-21NST

SPECIFICATIONS
ELECTRICAL KIT

Temperature Range	-22°F to 1472°F (-30°C to 800°C)
Basic Accuracy	1.50%
Distance to Spot Ratio	40 to 1
Contact Temperature	-40°F to 1022°F (-40°C to 550°C)
Display Resolution	0.1°F (0.1°C)
Response Time	<500 mS
Emissivity	Adjustable 0.10 to 1.00
MIN / MAX / AVG / DIF	YES
Data Storage	YES, 20 Points
Alarm (HI / LO)	YES
Locking Trigger	YES
Display Backlight	YES
Display Type	White on Black LCD
LED Flood Light	YES
Rugged Over-Molding	YES
Battery Type	M12™ Rechargeable REDLITHIUM™
Warranty	5 Years
Includes	2276-20 M12™ LASER TEMP-GUN™, (1) Thermocouple (K-Type), 48-11-2401 M12™ REDLITHIUM™ Battery, 48-59-2401 M12™ Lithium-ion Battery Charger, Carrying Case, Manual

![NIST] ![5 YEAR WARRANTY]

Tool-only also available.
2276-20
NIST #: 2276-20NST

Thermocouple input for contact temperature measurement

High-contrast, easy-to-read display provides clearer readings

Simplified user interface and feature set specifically tailored for the electrician

Built-in LED flood light lights the work area

Rugged over-molding for increased durability and grip

40:1 distance to spot ratio measures a 1' spot from 40' away

Ergonomic pistol grip design for ease of use

![M12™]

Rechargeable REDLITHIUM™ battery pack provides power for unmatched performance

LASER TEMP-GUN™
M12™ Cordless Thermometer for HVAC/R

2277-21
NIST #: 2277-21NST

SPECIFICATIONS
HVAC KIT

Temperature Range	-22°F to 1472°F (-30°C to 800°C)
Basic Accuracy	1.50%
Distance to Spot Ratio	40 to 1
Contact Temperature	-40°F to 1022°F (-40°C to 550°C)
Display Resolution	0.1°F (0.1°C)
Response Time	<500 mS
Emissivity	Adjustable 0.10 to 1.00
MIN / MAX / AVG / DIF	YES
Data Storage	YES, 20 Points
Alarm (HI / LO)	YES
Locking Trigger	YES
Display Backlight	YES
Display Type	White on Black LCD
LED Flood Light	YES
Humidity Measurement	YES
Dew Point Measurement	YES
Rugged Over-Molding	YES
Battery Type	M12™ Rechargeable REDLITHIUM™
Warranty	5 Years
Includes	2277-20 M12™ LASER TEMP-GUN™ for HVAC/R, (1) Thermocouple (K-Type), (48-11-2401 M12™ REDLITHIUM™ Battery, 48-59-2401 M12™ Lithium-ion Battery Charger, Carrying Case, Manual

Tool-only also available.
2277-20
NIST #: 2277-20NST

Thermocouple input for contact temperature measurement

High-contrast, easy-to-read display provides clearer readings

Simplified user interface and feature set specifically tailored for the HVAC technician

Built-in LED flood light lights the work area

Rugged over-molding for increased durability and grip

40:1 distance to spot ratio measures a 1' spot from 40' away

Ergonomic pistol grip design for ease of use

M12

Rechargeable REDLITHIUM™ battery pack provides power for unmatched performance

Contact Temp Meter
2270-20
NIST #: 2270-20NST

SPECIFICATIONS

Temperature Range	2,500°F to -328°F (1,372°C to -200°C)
Basic Accuracy	.1% of reading
Dual Temperature Input	YES
Display Resolution	0.1°F (0.1°C)
MAX / MIN / AVG	YES
Display Backlight	YES
Display Type	High-contrast White on Black
Rugged Over-Molding	YES
Warranty	5 Years
K-Type Thermocouple	YES
Display Values	T1, T2, T1-T2
Includes	(1) Contact Temp Meter (2270-20), (3) AA Batteries, (2) K-Type Thermocouple, (1) Magnet Strap, Manual

NIST

5 YEAR WARRANTY

Magnet strap for hanging meter in all applications

Thermocouple input for contact temperature measurement

Measures temperatures from 2500°F to -328°F (1372°C to -200°C) to cover most common applications

High-contrast, easy-to-read display provides clearer readings

Rugged over-molding for increased durability and grip

AA batteries included

Fluorescent Lamp & Ballast Tester
2210-20

SPECIFICATIONS

LAMP Test	T5, T8, T12
BALLAST Test	Electronic
PIN Test	Dual
Operating Temperature	-10°C to 50°C
Storage Temperature	-40°C to 60°C
Two Meter Drop Test	YES
Antenna Adapter	YES
Antenna Storage	Fully Retractable Inside Tool
Replaceable Antenna	YES
Battery Life	35 Hours
Auto Battery Off	Turns Off After 20 Minutes
Battery Type	Alkaline (AA)
Tool Warranty	5 Years
Includes	Fluorescent Lamp & Ballast Tester, Soft Carry Case, Antenna Adapter, Manual, (4) AA Batteries

Removable antenna adapter improves lamp test response

2.5' fully retractable antenna for extended reach when testing

Complete 3-in-1 solution – test lamps, ballasts and pins

Durable tool continues to work after 6.5 foot drop

Built-in LED work light illuminates dark work spaces

Visual and audible indicators provide easy feedback

Dial and buttons positioned for one-handed use

Rugged over-molding for increased durability and grip
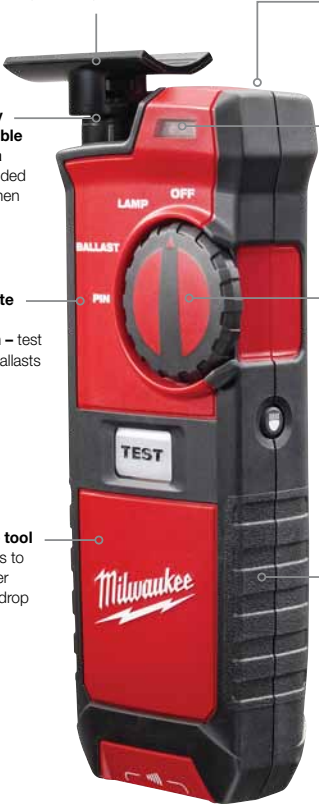
M-SPECTOR™ AV M12™
Cordless Multimedia Camera Kit

17mm Digital
2311-21

9.5mm Analog
2312-21

SPECIFICATIONS

2311-21 Camera Head	17mm Digital
2312-21 Camera Head	9.5mm Analog
Cable Length	3'
LCD Display	3.5" LCD
Display Resolution	320 x 240
Brightness Control	4X LED
Zoom	4X
Image Rotation	YES
Audio Capability	YES
Photo Capability	3,800 Photos
Video Recording	45 Min
Run-Time	12 Hrs.
Includes	2311-20 M-SPECTOR™ Camera, 48-11-2401 M12™ REDLITHIUM™ Battery, 48-59-2401 M12™ Lithium-ion Battery Charger, 3' Digital (17mm) Camera Cable, 2GB SD Card, USB Cable, Carrying Case

TOOL 5 YEAR / BATTERY 2 YEAR WARRANTY™

2GB SD card (included) records up to:
– 45 minutes audio and video
– 3,800 high resolution images

Integrated microphone and speaker

3.5" high resolution color LCD (320 x 240)

Rotates both live and captured images

USB cable – download files to a computer

M12

Rechargeable REDLITHIUM™ battery pack provides power for unmatched performance

4X image zoom, 4X LED brightness control and auto shut-off

M-SPECTOR 360™
Rotating Inspection Scope
9mm Digital
2313-21

SPECIFICATIONS

Cable Length	3'
LCD Display	2.7"
High-Resolution Color Display Resolution	320 x 240
Image Sensor Resolution	640 x 480
LED Worklight	4 LED's, 5 Settings
Run-Time	12 Hrs.
Includes	2313-21 M-SPECTOR 360™ Kit, 48-11-2401 M12™ REDLITHIUM™ Battery, 48-59-2401 M12™ Lithium-ion Battery Charger, Carrying Case, Hook, Magnet and Mirror Attachments

5/2 YEAR TOOL / BATTERY WARRANTY™

Tool-only also available.
2313-20

Rotating screen – screen rotates providing the user fluid image control

Optimized 2.7" LCD – digital image and larger screen delivers crisp, clear image

9mm 640 x 480 digital image sensor – best in class image quality in tight spaces

Enhanced cable – improved durability and maneuverability

M12™

Rechargeable REDLITHIUM™ battery pack provides power for unmatched performance

4 surround LED lights – best in class brightness without shadow or glare

![Milwaukee - Nothing but HEAVY DUTY.®]

M-SPECTOR 360™ 9 ft
Rotating Inspection Scope Kit
9mm Digital
2314-21

SPECIFICATIONS

Cable Length	9'
LCD Display	2.7" High-Resolution Color
Display Resolution	320 x 240
Image Sensor Pixel Density	640 x 480
LED Worklight	4 LED's, 5 Settings
Run-Time	12 Hrs.
Includes	2314-21 M-SPECTOR 360™ Kit, 48-11-2401 M12™ REDLITHIUM™ Battery, 48-59-2401 M12™ Lithium-ion Battery Charger, Carrying Case, Hook Magnet and Mirror Attachments, Plumbing Ball Attachment

5 / 2 YEAR WARRANTY™ (TOOL / BATTERY)

Rotating screen – screen rotates providing the user fluid image control

Optimized 2.7" LCD – digital image and larger screen delivers crisp, clear image

Enhanced cable – improved durability and maneuverability

9mm 640 x 480 digital image sensor – best in class image quality in tight spaces

M12

Rechargeable **REDLITHIUM™ battery pack** provides power for unmatched performance

4 surround LED lights – best in class brightness without shadow or glare

SUB-SCANNER™
M12™ Cordless Detection Tool Kit
2291-21

SPECIFICATIONS

Max Scanning Depth	
Stud Mode	1.5"
Metal Mode	6"
Measurement Accuracy	
Stud Center	0.25"
Metal Center	0.5"
Specifications	
Auto Calibration	YES
Battery Type	M12™ Rechargeable REDLITHIUM™
Warranty	5 Years
Includes	2291-20 SUB-SCANNER™ M12™ Detection Tool, 48-11-2401 M12™ REDLITHIUM™ Battery, 48-59-2401 M12™ Lithium-ion Battery Charger, Carrying Case, Manual

TOOL 5 YEAR / BATTERY 2 YEAR WARRANTY™

Tool-only also available.
2291-20

Four wheel design for durability and smooth, accurate measurement

Detects metal and wood by scanning into concrete, drywall, wood and metal

Detects rebar up to 6" deep in concrete

High-contrast, easy-to-read display provides clearer readings

Rugged over-molding for increased durability and grip

Ergonomic handle position for ease of use

M12

Rechargeable REDLITHIUM™ battery pack provides power for unmatched performance

Laser Distance Meter
2280-20

SPECIFICATIONS

Basic Accuracy	± 0.059" (± 1.5 mm)
Distance Range	0.16' (0.05m) to 197' (60m)
Arithmetic Functions	YES
6 Measure Functions	Length, Area, Volume, Indirect Measurement (Pythagoras), Stake Out, Timer
Includes	(2) AAA Batteries, Carrying Case, Manual

5 YEAR WARRANTY

Easy-to-read display with backlight

Six different measurement functions

Easily add and subtract distance values

Memory recall up to 10 measurements

End bracket for measuring from edges and corners

M-SPECTOR™ Accessories

For use with:
• M-SPECTOR™ Digital Inspection Camera Kit (2300-20)

M-SPECTOR™ (17mm)
3' Replacement
Digital Camera Cable
48-53-0115

M-SPECTOR™
3' Extension Cable (17mm)
48-53-0110

M-SPECTOR™ AV Accessories

For use with:
• M-SPECTOR™ AV M12™ Cordless Multimedia Camera Kit (17mm) (2311-21)
• M-SPECTOR™ AV M12™ Cordless Multimedia Camera Kit (9.5mm) (2312-21)

M-SPECTOR™ AV (17mm)
3' Replacement
Digital Camera Cable
48-53-0125

M-SPECTOR™ AV (9.5mm)
3' Replacement
Analog Camera Cable
48-53-0130

M-SPECTOR™ AV (17mm) 8'
Extension Cable
48-53-0140

M-SPECTOR™ AV (17mm)
3' Extension Cable
48-53-0141

M-SPECTOR™ 360 Accessories

For use with:
• Milwaukee Models 23-13-20, 2313-21 and 2314-21

M-SPECTOR 360™
Scope Head Attachment Set
48-53-0112

M-SPECTOR 360™
Pipe Guide Attachment
48-53-0113

Accessory Cases

**Rollup
Accessory Case
48-55-0165**

**Zippered
Accessory Case
48-55-0170**

Rollup Accessory Case
SPECIFICATIONS

Material	Nylon
Velcro	YES
Inside Compartments	4 Pockets with Velcro
Strap for Hanging	YES
Warranty	1 Year

Zippered Accessory Case
SPECIFICATIONS

Material	Nylon
Zippered	YES
Inside Pocket	YES
Strap for Hanging	YES
Warranty	1 Year

Meter Cases

**Meter Case
48-55-0175**

**Large Meter Case
48-55-0180**

Meter Case
SPECIFICATIONS

Material	Nylon
Zippered	YES
Inside Pocket	YES
Strap for Hanging	YES
Warranty	1 Year

Large Meter Case
SPECIFICATIONS

Material	Nylon
Zippered	YES
Inside Pocket	YES
Strap for Hanging	YES
Warranty	1 Year

Electrical Accessories

Electrical Test Lead Set
49-77-1001

Electrical Test Lead Set
SPECIFICATIONS

Maximum Voltage	1000V
Maximum Current	10A
Safety Rating	CAT IV 600V / CAT III 1000V
Overmold Material	PVC
Length	55 inches (1.4 meter)
Warranty	1 Year

Electrical Test Leads
49-77-1003

Electrical Test Leads
SPECIFICATIONS

Maximum Voltage	1000V
Maximum Current	10A
Safety Rating	CAT IV 600V / CAT III 1000V
Overmold Material	PVC
Length	39 inches (1.0 meter)
Warranty	1 Year

Electrical Test Probes
49-77-1004

Electrical Test Probes
SPECIFICATIONS

Maximum Voltage	1000V
Maximum Current	10A
Safety Rating	CAT IV 600V / CAT III 1000V
Overmold Material	PVC
Probe Metal Used	Stainless Steel
Warranty	1 Year

Electrical Alligator Clips
49-77-1005

Electrical Alligator Clips
SPECIFICATIONS

Maximum Voltage	1000V
Maximum Current	10A
Safety Rating	CAT IV 600V / CAT III 1000V
Overmold Material	PVC
Probe Metal Used	Stainless Steel
Warranty	1 Year

Temperature Accessories

Thermocouple
(Dual Banana)
49-77-2001

Thermocouple
(K-Type)
49-77-2002

Thermocouple
(Dual Banana and K-Type)
SPECIFICATIONS

Temperature Range	-40°F to 500°F (-40°C to 260°C)
Temperature Accuracy	2.5%
Overmold Material	Teflon
Length	39 inches (1.0 meter)
Warranty	1 Year

Hand Tools

10IN1 Ratchet ECX™ Multi-Bit Driver
48-22-2301

Power Groove Bits	Extended Reach

10IN1 SAE Hex Key Driver
48-22-2104

Power Groove Bits	Wire Stripper

4 Pc SAE Hollow Shaft Nut Driver Set
48-22-2404

Drives Square Fasteners	3" Hollow Shaft

2 Pc Steel Cap Demolition Screwdriver Set
48-22-2002

Compression Forged Tips	High Impact Metal Core

6IN1 Combination Pliers
48-22-3069

Pliers	Wire Cutter

6IN1 Lineman's Pliers
48-22-3309

Pliers	Fish Tape Puller

3 Pc 1000V Insulated Screwdriver Set
48-22-2202

Slim Drive Shaft	Dual Layer Insulation

Quick Adjust Reaming Pliers
48-22-3110

Quick Adjust	Reaming Head

FACTORY SERVICE CENTERS

Atlanta
6155 Jimmy Carter Blvd
Suite F2
Norcross, GA 30071

Boston
375 University Avenue
Westwood, MA 02090

Chicago
6310 Gross Point Road
Niles, IL 60714

Cleveland
8200 Sweet Valley Drive
Valley View, OH 44125

Dallas
2701 W Airport Freeway
Unit 110
Irving, TX 75062

Denver
2500 W 8th Avenue, Unit E
Denver, CO 80204

Houston
3566 West T.C. Jester Blvd
Houston, TX 77018

Las Vegas
5580 S Decatur Blvd
Unit 110
Las Vegas, NV 89118

Miami
3311 NW 82nd Avenue
Miami, FL 33122

Minneapolis/St. Paul
9705 Valley View Road
Eden Prairie, MN 55344

Milwaukee
13145 W Lisbon Road
Brookfield, WI 53005

New York City
3068 Whitestone Expressway
Flushing, NY 11354

Philadelphia
821 W Sproul Road
Springfield, PA 19064

San Antonio
14329 San Pedro Avenue Suite D
San Antonio, TX 78232

San Diego
8252 Clairmont Mesa Blvd Unit D
San Diego, CA 92111

San Francisco/Oakland
41601 Albrea Street
Fremont, CA 94538

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18939 120th Avenue NE
Suite 111
Bothell, WA 98011

Washington D.C.
11712 Baltimore Avenue
Beltsville, MD 20705

CANADA

Edmonton
18129 111 Avenue NW
Edmonton, AB T5S 2P2

Toronto
140 Fernstaff Court, Unit 4
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