

GSA

SHIMPO INSTRUMENTS



tachometers /stroboscopes /test stands /force gauges /and more

FORCE SPEED MEASUREMENT



Servicio de Medición + Control, S.A. de C.V.

TECNICOS ESPECIALIZADOS



SHIMPO

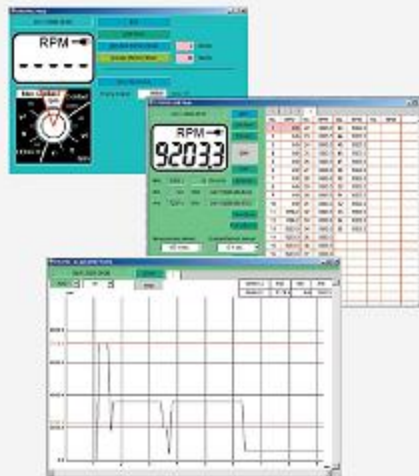
SHIMPO'S DT-209X / DT-209X-S12

Big things come in small packages

Demanded by loyal users of the popular DT-205L laser tachometers, Shimpo responded by creating the DT-209X series of LASER combination hand held tachometers. Based on the DT-205L with its rugged construction and quality components; the DT-209X is equipped with DATA COLLECTION features that adds flexibility in the field for Maintenance, Quality Control and R&D professionals.

Simultaneous storage of data in three different measuring modes (USB, Standard, and Average) both the DT-209X and DT-209X-S12 offer incredible value and ease of use in Contact and Non-contact applications.

Enhanced download features and online controls, showing trending and real time data via USB communication; you can easily access your data by the free software included in each DT-209X package. USB and Analog output included.



DT-209X Software

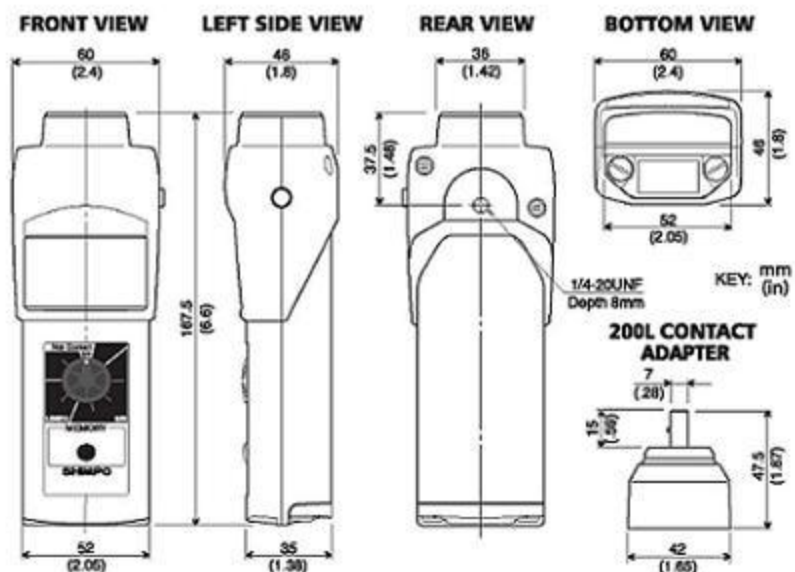
- 3 Modes of measurement (USB, STANDARD, AVERAGE)
- Selectable units of measure and display refresh interval
- Graph capability in USB mode
- Data can be imported to spreadsheet reports
- Automatic data calculation for Last, Minimum, Maximum and Average readings
- Readings can be set for length and rate measurement
- Smart settings for trigger, max and min limits. (PC will beep indicating out of range data)
- Synchronize time with PC for time stamping
- Multiple data storage in USB mode for different records
- Programmable 1-volt analog output for chart recorders



FEATURES

- 1/4 x 20 mounting hole
- Sophisticated laser beam detection; up to 14'
- Exceptional accuracy
- Length and rate functions
- Multi-mode speed selection
- Length/sec available
- Hardy aluminum construction
- Large 5 digit display
- Expansive memory capacity
- Extended battery life
- Free N.I.S.T. certificate

DIMENSIONS



ALSO AVAILABLE



*DT-209X shown in Carrying Case.
12" wheel FPM-12 & FPM-12CBL.*

SPECIFICATIONS

MODEL	DT-209X / DT-209X-S12
MEASURING RANGE	6 - 99,999 rpm
MEASURING RANGE CONTACT	0.8 - 25,000 rpm
ACCURACY	±1 rpm: 6 - 8,300 rpm / ±2 rpm: 8,301 - 25,000 rpm / ±0.006 % of reading / ±1 digit (or 7 rpm max.): 25,001 - 99,999 rpm
DISPLAY	5 digit 0.47" (12 mm) high LCD
MEASURING UNIT	rpm: (Non Contact up to 14' away) Contact: ypm, mPM, fpm, ipm and Length; yd, m, ft, in, linear rate and length: using contact adapter included and 6" or 12" circumference wheels.
MEASURING MODE	USB mode; PC online measuring / standard (STD) mode; Standard measuring / Average (AVE) mode; Average data measuring
MEMORY	STD mode; 24 blocks, 10 points/block (Total; 240 data) AVE mode; 30 blocks (Last, Max, Min, Average data in each block) Date and hour of start/finish are stored in each block. (Can download data with USB communication.)
USB COMMUNICATION	USB 1.1
ANALOG OUTPUT	Max. 1 V
DISPLAY UPDATE TIME	1 second (typical)
DETECTION	Laser diode
SYSTEM CONTROL	Single-chip C-MOS microprocessor
OVER RANGE INDICATOR	Flashing numerals
VOLTAGE REQUIREMENT	2 AA / 1.5 V Batteries
LOW BATTERY INDICATOR	Flashing "LO BAT" display
AUTO POWER SHUT-OFF	Yes (except USB mode)
BATTERY LIFE	15 hrs Approx.
OPERATING ENVIRONMENT	Non-corrosive
OPERATING TEMPERATURE RANGE	32° - 113°F (0 - 45°C)
CONSTRUCTION	Die-cast aluminum housing
WEIGHT	DT-209X: 0.9 pound (400g) / DT-209X-S12: 1.0 pound (460g)
DIMENSIONS	6.6"L x 2.4"W x 1.8"H (167.5 mm x 60 mm x 46 mm)
WARRANTY	1 year
STANDARD ACCESSORIES	Reflective tape, 2 cone adapters, funnel adapter, 3 1/2" Extension shaft carrying case, NIST certificate, Master Wheel (6" cir.) and 200L adapter, USB cable, case, NIST certificate, Master Wheel (6" cir.) and 200L adapter, USB cable, Application software (CD-R)

DIGITAL CONTACT TACHOMETERS

DT-105A (LCD)

DT-107A (LED)

The World's Finest Tachometers Are Now Even Better

Shimpo's microprocessor technology has heralded a superior standard in tachometer accuracy and capabilities for measuring and recording rotational/linear/surface speeds and total length.

Offering unprecedented confidence via new improvements, the DT-105A and DT-107A battery-operated tachometers still feature the same rugged, high quality components that have made them the benchmark in the industry. These user-friendly, value-packed units feature expanded memory storage, added length functions, free N.I.S.T. certificate and many standard accessories.



DT105A

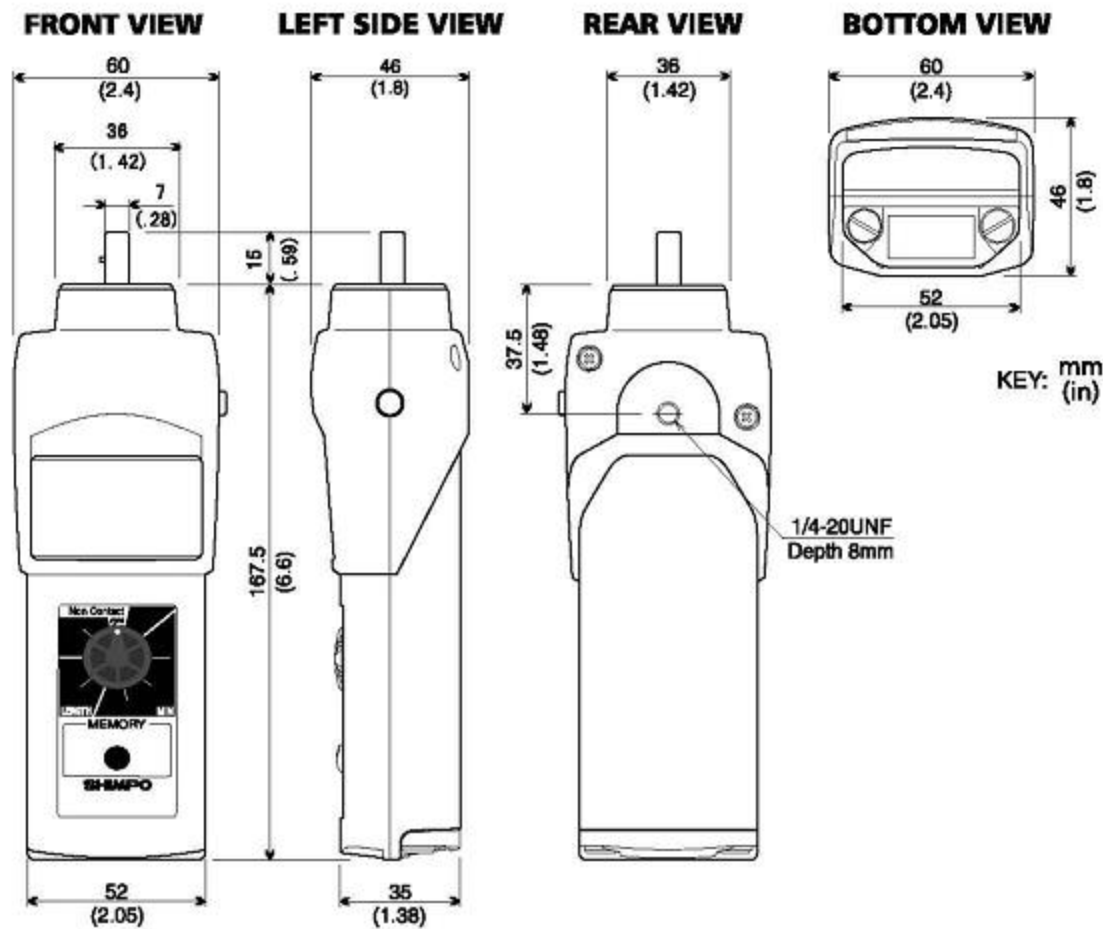
Features	Benefits
Multi-mode speed selection	Features 16 selections for optimum versatility
Outstanding accuracy (±0.006% of reading)	Provides reliable measurement results
Rugged aluminum construction	Built to stand the test of time
Direct length measurement	Offers value & versatility via added applications
Extensive speed range (0.10 - 25,000 RPM)	Maximizes usage in almost limitless applications
Large 5 digit display	Allows easy reading of numbers
Lengthy battery life (up to 60 hours)	Advanced power management enables longer operating times
Large 10 test memory capacity (selectable to 5 minutes or more)	Stores last min/max readings for thorough equipment and process inspection
Total revolution display	Enables rotation counting during process analysis
Free N.I.S.T. certificate	Permits easy compliance with regulations
CE mark	Compliant with applicable EU directives
Minimum shaft loading or overspeed	Prevents potential instrument protection damage



WIRE/YARN TEST FIXTURE

Optional fixture WY100 is attached to the DT105A / 107A tachometers for rate and length measurement.

DT-105A / DT-107A



SPECIFICATIONS		
	DT-105A	DT-107A
Measuring Range	0.10 - 25,000 RPM with floating decimal	
Accuracy	±0.06 RPM : 0.10 - 999.9 RPM ±0.6 RPM : 1,000.0 - 9,999.9 RPM ±0.006 % of reading ±1 digit (or 2 RPM max.) : 10,000 - 25,000 RPM	
Display	5 digit 0.47" (12 mm) high LCD	
Measuring Units	Revolutions : RPH,RPM Yards : YPH,YPM Length : m, cm, inches, feet, yards	Feet : FPH,FPM Inches : IPM Total Revolutions : REV Miles : MPH Meters : mPH,mPM
Memory	13 readings are stored in memory and retained for 5 minutes (last, max., min. and 10 extra measurements)	
Display Update Time	1 second (typical)	
Detection	Optical coupler, 60 pulses/rev.	
System Control	Single-chip C-MOS microprocessor	
Over Range Indicator	Flashing numerals	
Voltage Requirement	2 AA 1.5 V batteries	
Low Battery Indicator	Flashing "LO BAT" display	"B" display
Auto Power Shut-Off	Yes	
Battery Life	45-60 hrs approx.	25 hrs approx.
Operating Temperature Range	32° - 113° F (0 - 45° C)	
Decimal Point	Floating	
Construction	Die-cast aluminum housing	
Weight	0.9 lb (400 g)	
Dimensions	7.2" L x 2.4" W x 1.8" H (182.5 mm x 60 mm x 46 mm)	
Warranty	1 year	
Standard Accessories	2 cone adapters, 1 funnel adapter, 1 3-1/2" extension shaft, NIST certificate, carrying case, 1 master wheel (6" cir.)	
Optional Accessories	Wire/yarn fixture, cone adapter, funnel adapter, extension shaft, 6" measuring wheel, 12" measuring wheel	

DIGITAL CONTACT TACHOMETERS

DT-105A-S12 (LCD)

DT-107A-S12 (LED)

Superior accuracy in high speed measurement

Possessing the same sophisticated features and accessories as our renowned DT-105A/107A models, the DT-105A-S12 and 107A-S12 tachometers provide outstanding accuracy in measuring speed and direct linear length via a 1.2" wheel. The larger wheel rotates more slowly than a standard 6" wheel, thus enabling confident and safe high speed measurement.



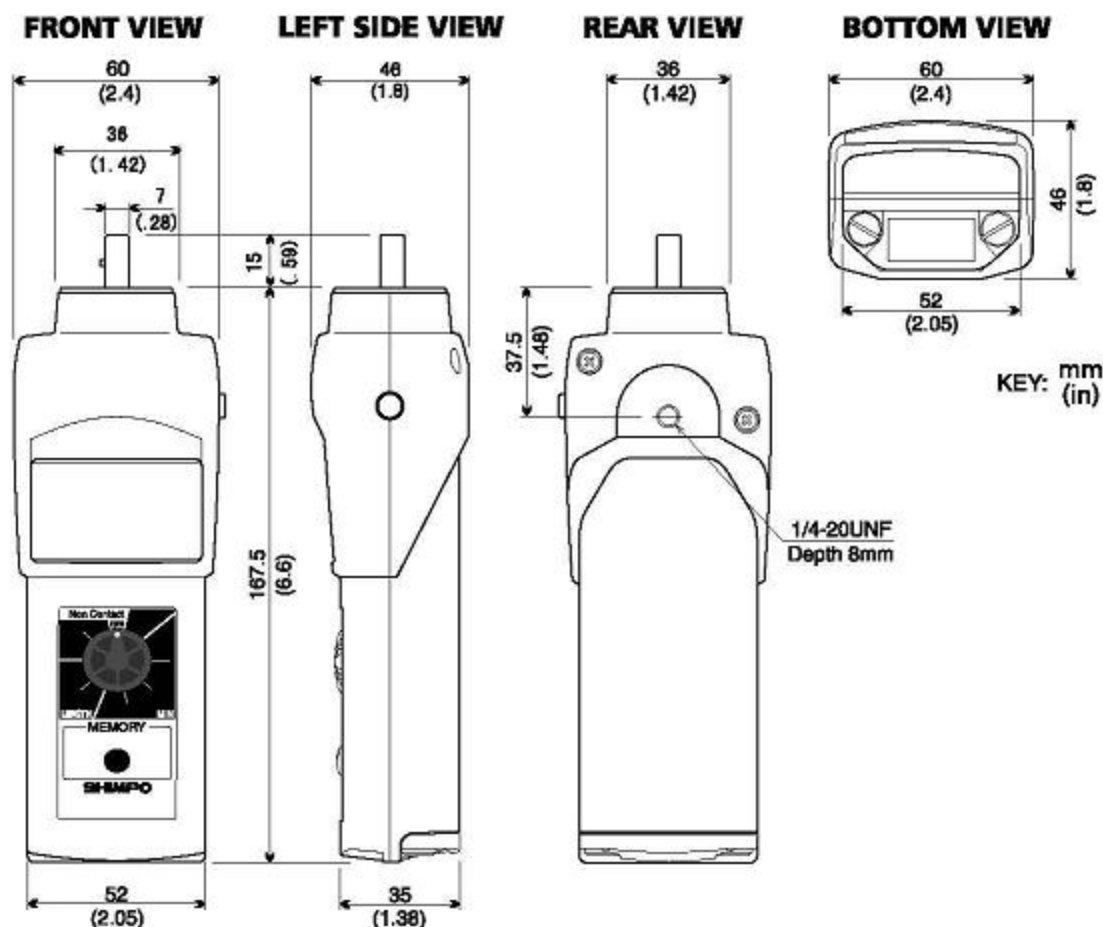
DT-107A-S12

Features	Benefits
Multi-mode speed selection	Features 16 selections for optimum versatility
Outstanding accuracy (±0.006% of reading)	Provides reliable measurement results
Rugged aluminum construction	Built to stand the test of time
Direct length measurement	Offers versatility via added applications
Extensive speed range (0.10 - 25,000 RPM)	Maximizes usage in almost limitless applications
Large 5 digit display	Allows easy reading of numbers
Lengthy battery life (up to 60 hours)	Advanced power management enables longer operating times
Large 10 test memory capacity (selectable to 5 minutes or more)	Stores last min/max readings for thorough equipment and process inspection
Total revolution display	Enables rotation counting during process analysis
Free N.I.S.T. certificate	Permits easy compliance with regulations
CE mark	Compliant with applicable EU directives
Minimum shaft loading over speed	Prevents potential instrument protection damage



DT-105A-S12 KIT

DT-105A-S12 / DT-107A-S12



SPECIFICATIONS		
	DT-105A-S12	DT-107A-S12
Measuring Range	0.10 - 25,000 RPM with floating decimal	
Accuracy	±0.06 RPM : 0.10 - 999.9 RPM ±0.6 RPM : 1,000.0 - 9,999.9 RPM ±0.006 % of reading ±1 digit (or 2 RPM max.) : 10,000 - 25,000 RPM	
Display	5 digit 0.47" (12 mm) high LCD	5 digit 0.4" (10 mm) high LED
Measuring Units	Revolutions : RPH,RPM Yards : YPH,YPM Length : m, cm, inches, feet, yards	Feet : FPH,FPM Inches : IPM Total Revolutions : REV Miles : MPH Meters : mPH,mPM
Memory	13 readings are stored in memory and retained for 5 minutes (last, max., min. and 10 extra measurements)	
Display Update Time	1 second (typical)	
Detection	Optical coupler, 60 pulses/rev.	
System Control	Single-chip C-MOS microprocessor	
Over Range Indicator	Flashing numerals	
Voltage Requirement	2 AA 1.5 V batteries	
Low Battery Indicator	Flashing "LO BAT" display	"B" display
Auto Power Shut-Off	Yes	
Battery Life	40-60 hrs approx.	25 hrs approx.
Operating Temperature Range	32° - 113° F (0 - 45° C)	
Decimal Point	Floating	
Construction	Die-cast aluminum housing	
Weight	0.9 lb (400 g)	
Dimensions	7.2" L x 2.4" W x 1.8" H (182.5 mm x 60 mm x 46 mm)	
Warranty	1 year	
Standard Accessories	2 cone adapters, 1 funnel adapter, 1 3-1/2" extension shaft, NIST certificate, carrying case, 1 master wheel (12" cir.)	

LASER CONTACT/NON-CONTACT TACHOMETERS

DT-205L (LCD) DT-207L (LED)

A laser allows precise RPM measurement from 14 feet!

Our new DT-205L and DT-207L tachometers incorporate laser technology yet retain our hallmark rugged construction and reliable quality components, both offer incredible value and versatility as they perform non-contact *and* contact applications via the included contact adapter. We're confident you'll agree that these fine units are the most advanced handheld tachometers on the market!



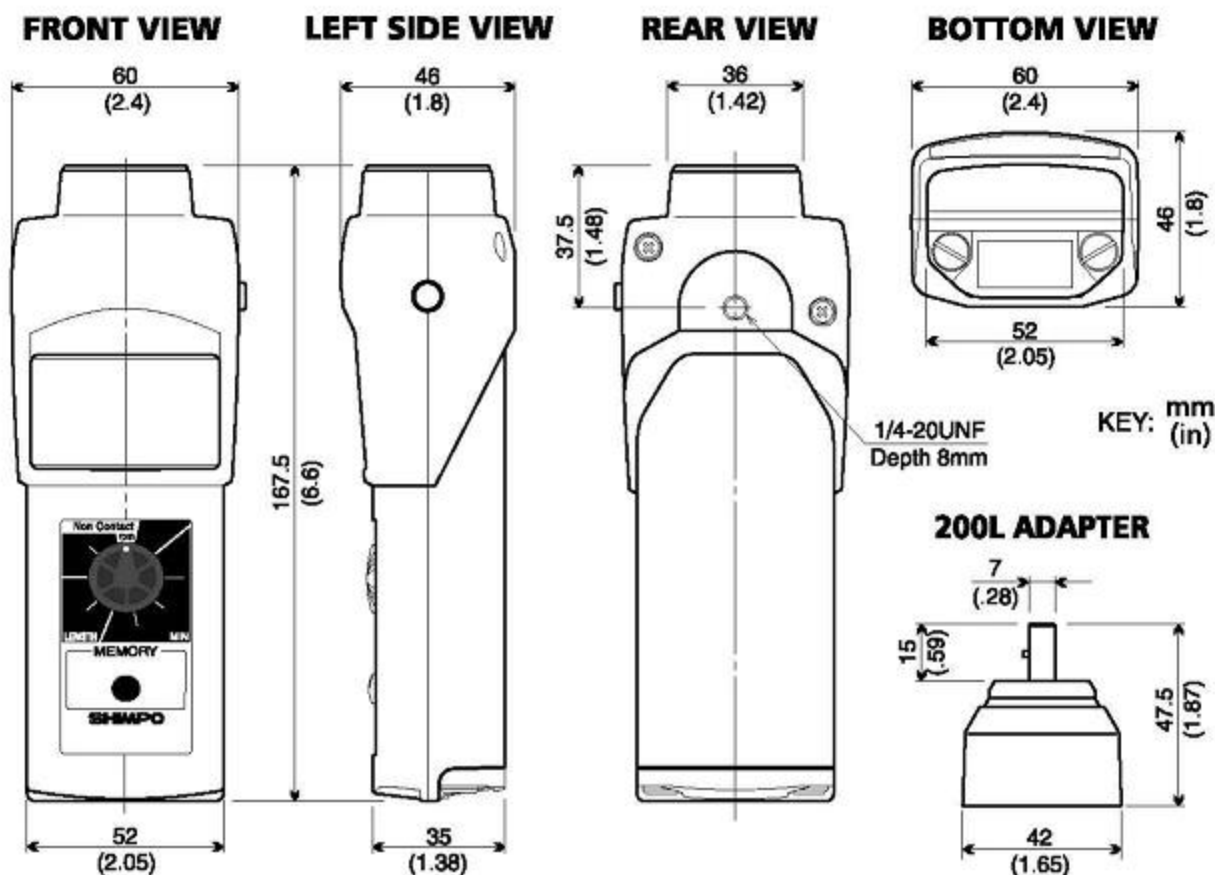
DT-205L

Features	Benefits
Sophisticated laser beam detection	Safely allows RPM detection in hard-to-reach or dangerous areas
Exceptional accuracy (±0.0006% of reading)	Assures reliable measurement results
Length and rate functions	Offer expanded measurement capabilities
Multi-mode speed selection	9 selections allow optimum versatility
Broad speed range (up to 99,999 RPM)	Covers a wide range of applications
Hardy aluminum construction	Assures maintenance-free performance for many years
Large 5 digit display	Numbers are easily readable
Expansive 10 test memory capacity (selectable to 5 minutes or more)	Stores last/min/max readings for thorough equipment/process inspection
Extended battery life (up to 80 hours)	Advanced power management for longer operating times/increased productivity
Free N.I.S.T. certificate	Permits easy compliance with regulations
CE mark	Compliant with applicable EU directives



DT-205L KIT





SPECIFICATIONS		
	DT-205L	DT-207L
Measuring Range	6 - 99,999 RPM	
Accuracy	±1 RPM : 6 - 8,300 RPM ±2 RPM : 8,300 - 25,000 RPM ±0.006 % of reading ±1 digit (or 2 RPM max.) : 25,000 - 99,999 RP	
Display	5 digit 0.47" (12 mm) high LCD	5 digit 0.4" (10 mm) high LED
Measuring Units	RPM (on contact using adapter, included) For rate : YPM, mPM, FPM, IPM and length : YRD, m, FT, IN use 6" cir. wheel with 200L adapter	
Memory	13 readings are stored in memory and retained for 5 minutes (last, max., min. and 10 extra measurements)	
Display Update Time	1 second (typical)	
Detection	Laser diode	
System Control	Single-chip C-MOS microprocessor	
Over Range Indicator	Flashing numerals	
Voltage Requirement	2 AA 1.5 V batteries	
Low Battery Indicator	Flashing "LO BAT" display	"B" display
Auto Power Shut-Off	Yes	
Battery Life	40-60 hrs approx.	25 hrs approx.
Operating Temperature Range	32° - 113° F (0 - 45° C)	
Construction	Die-cast aluminum housing	
Weight	0.8 lb (365 g)	
Dimensions	6.6" L x 2.4" W x 1.8" H (167.5 mm x 60 mm x 46 mm)	
Warranty	1 year	
Standard Accessories	Reflective tape, 2 cone adapters, funnel adapter, 3 1/2" extension shaft, carrying case, NIST certificate, master wheel (6" cir.) & 200L adapter	

LASER CONTACT / NON-CONTACT TACHOMETERS

DT-205L-S12 (LCD)

DT-207L-S12 (LED)

Capture fast speeds with laser precision

Incorporating the precise laser technology and user-friendly functions as our DT-205L/207L tachometers, the DT-205L-S12 and DT-207L-S12 provide exceptional accuracy in measuring speed and length via a 12" wheel; the larger wheel rotates more slowly than a standard 6" wheel, enabling reliable and safe registration of high speeds. These superior instruments also feature a contact adapter, conveniently allowing both non-contact and contact measurement.

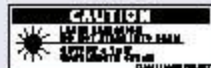


DT-207L-S12

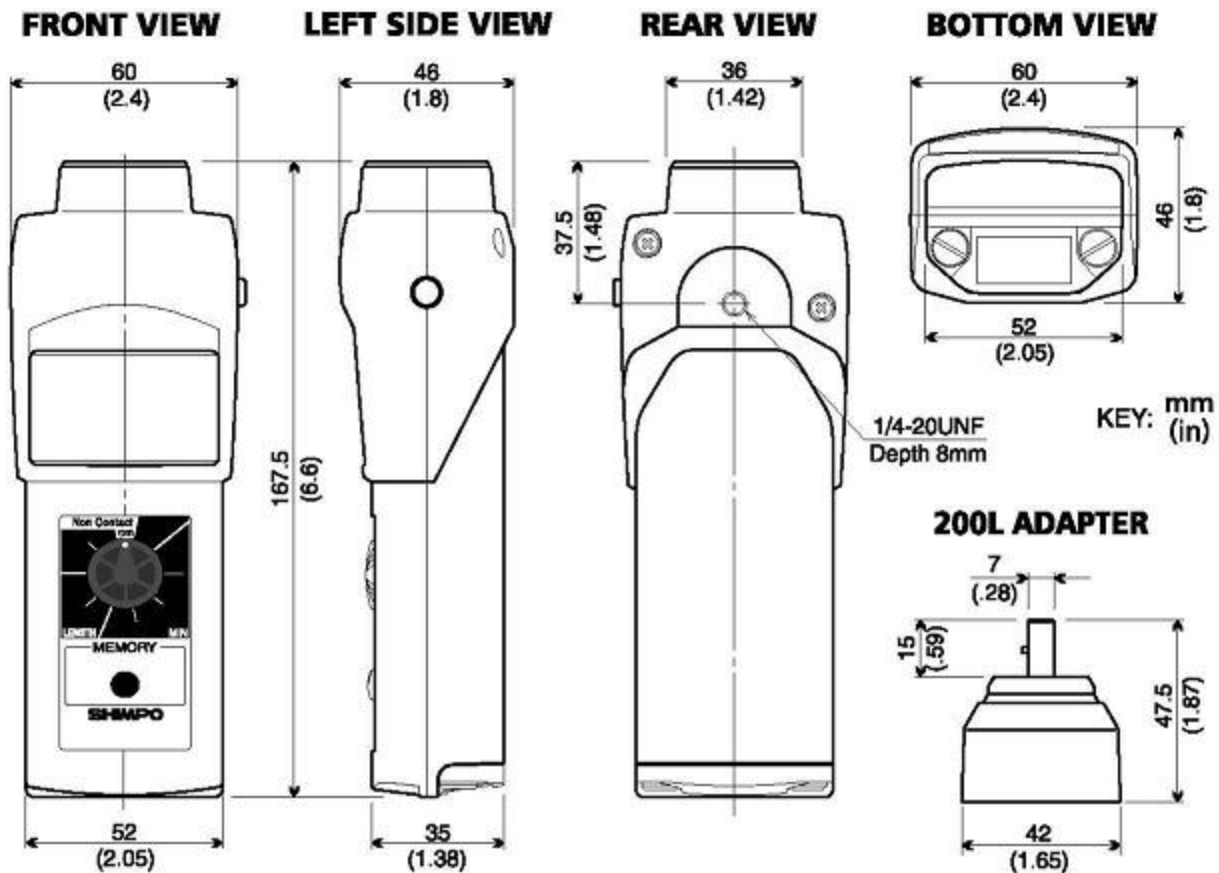
Features	Benefits
Advanced laser beam detection	Enables safe RPM measurement from 14 feet
Extremely accurate (±0.0006% of reading)	Fully meets the strictest tolerances
Length and rate functions	Increases value/versatility via added applications
Multi-mode speed selection	Provides versatility via 9 selections
Extensive speed range (up to 99,999 RPM)	Maximizes usage in almost limitless applications
All metal construction	Exceptional durability; withstands harsh use
Large 5 digit display	Permits easy reading
Expansive 10 test memory capacity	Allows thorough equipment/process inspection
Lengthy battery life (up to 60 hours)	Longer operating times are achieved
Free N.I.S.T. certificate	Permits easy compliance with regulations
CE mark	Compliant with applicable EU directives



DT-207L-S12 KIT



DT-205L-S12 / DT-207L-S12



SPECIFICATIONS		
	DT-205L-S12	DT-207-S12
Measuring Range	6 - 99,999 RPM	
Accuracy	±1 RPM : 6 - 8,300 RPM ±2 RPM : 8,300 - 25,000 RPM ±0.006 % of reading ±1 digit (or 2 RPM max.) : 25,000 - 99,999 RP	
Display	5 digit 0.47" (12 mm) high LCD	5 digit 0.4" (10 mm) high LED
Measuring Units	RPM (on contact using adapter, included) for rate ; YPM, mPM, FPM, IPM and Length ; YRD, m, FT, IN use 12" cir. wheel with 200L adapter	
Memory	13 readings are stored in memory and retained for 5 minutes (last, max., min. and 10 extra measurements)	
Display Update Time	1 second (typical)	
Detection	Laser diode	
System Control	Single-chip C-MOS microprocessor	
Over Range Indicator	Flashing numerals	
Voltage Requirement	2 AA 1.5 V batteries	
Low Battery Indicator	Flashing "LO BAT" display	"B" display
Auto Power Shut-Off	Yes	
Battery Life	40-60 hrs approx.	25 hrs approx.
Operating Temperature Range	32° - 113° F (0 - 45° C)	
Construction	Die-cast aluminum housing	
Weight	0.8 lb (365 g)	
Dimensions	6.6" L x 2.4" W x 1.8" H (167.5 mm x 60 mm x 46 mm)	
Warranty	1 year	
Standard Accessories	Reflective tape, 2 cone adapters, funnel adapter, 3/8" extension shaft, carrying case, NIST certificate, master wheel (12" cir.) & 200L adapter	

DIGITAL STROBOSCOPES

DT-311A

Exceptional ruggedness and reliability

Shimpo's dual function strobes provide the illusion of "stopped motion": by adjusting the strobe's flash rate, equipment and printing appear to be standing still or in slow motion. Our strobes also measure rotational (RPM) or reciprocating (strokes per minute) speeds with the same precision as an electronic digital tachometer.

Ideally suited for printing inspection, motion analysis, preventive maintenance and speed measurement of repetitive motion, our strobes provide timely data on vibrating parts, leaks, spray patterns and a variety of industrial and scientific operations.

Don't be fooled... while the **DT-311A** strobe is extremely easy to operate via its lightweight and compact design, its rugged metal construction provides unequalled reliability in the harshest environments.

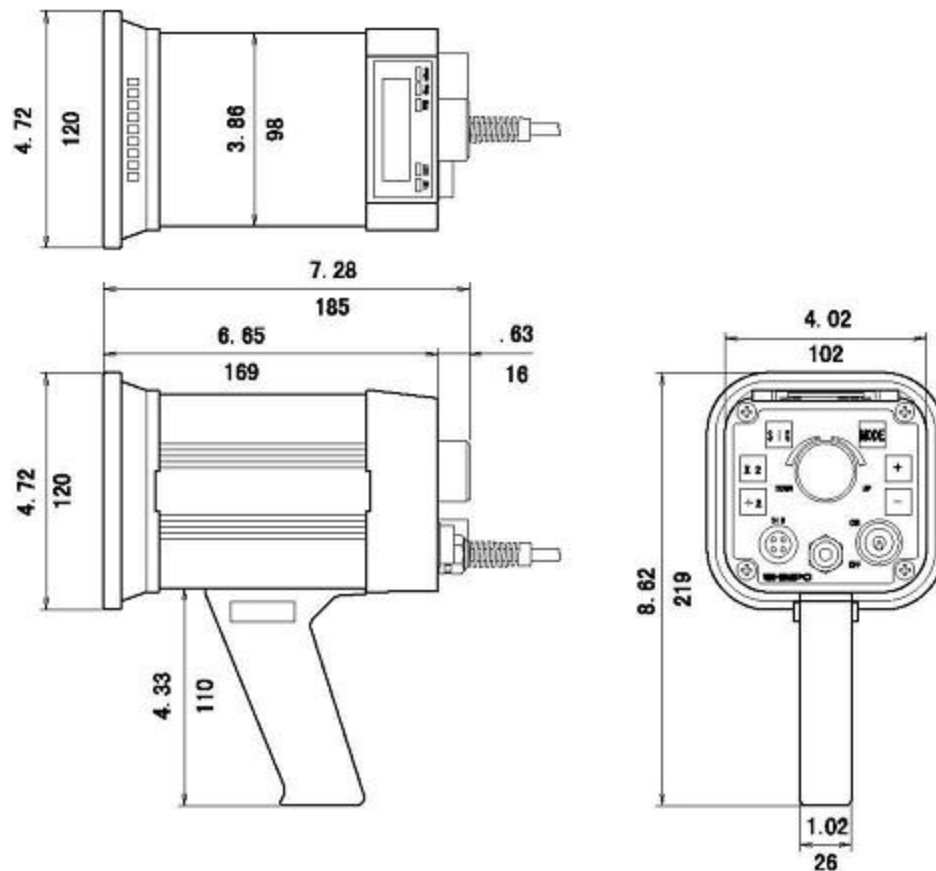


DT-311A

Features	Benefits
Extruded aluminum construction	Rugged and durable; assures reliable service
Highly accurate (± 0.01% of reading)	Ideal for QC inspection and process control
Phase shift (in degrees of delay time)	Enables visual analysis of rotating/reciprocating objects through all points of motion/time angle
High flash rate (up to 35,000 FPM)	Fits most industrial specialty applications
Microprocessor controlled	Assures top performance in volatile temperature environments
External trigger	Automatically synchronizes unit with equipment
Synchronous output	Permits unit to power other strobes
Flash timer control	Maximizes flash tube life
Continuous duty cycle	Eliminates downtime waiting for unit to cool
Highly polished focused reflector	Prevents "blind" viewing areas
Manual flash controller knob	Allows easy/accurate flash rate adjustments



STOP ACTION PHOTOGRAPHY
Motion Inspection



SPECIFICATIONS

DT-311A

INTERNAL MODE

Flashing Range	40.0 - 35,000 FPM (flashes per minute)			
Accuracy	±0.01 % of reading			
Resolution	0.1 FPM : 40.0 - 5,000 FPM	0.2 FPM : 5,000 - 8,000 FPM	0.5 FPM : 8,000 - 10,000 FPM	1 FPM : 10,000 - 35,000 FPM
Phase Shift	Use +/- push buttons (360° in 6 seconds)			
Display Update Time	0.2 seconds approx.			
Output Signal	Synchronous, 400 μsec. Pulse output, 0 to +12 VDC amplitude(approx.), 4.7 KΩ impedance			
Rate Multiplier/Divider	Multiply by 2, divide by 2			

EXTERNAL MODE

Flashing Range	0.0 to 35,000 FPM
Accuracy	±0.01 % ±1 digit
Phase Shift	0 to 359° with 1° resolution
Delay Time	0 to 2,000 μsec from 40 - 10,000 FPM
External Trigger Input Signal	LO level : 0 - 0.8 VDC, HI level : 2.5 - 12 VDC or open collector (NPN), pulse width 50 μsec min.
Input Impedance	4.7 KΩ to 12 V / 6.8 KΩ to 0 V

GENERAL

Display	5 digits, 0.4" (10 mm) high, LED
Flash Tube Power/Life	Xenon, 10 W max. (100 million flashes)
Flash Duration	10 - 40 μsec
Sensor Power Supply	12 VDC (40 mA)
Low Battery Indicator	N/A
Power Requirement	115 VAC or 220 VAC ±10 % 60/50 Hz, 30 VA (specify voltage)
Operating Temperature Range	32° - 104°F (0 - 40°C)
Weight	2.6 lb (1.2 kg)
Dimensions	7.28" L x 4.72" W x 4.72" H (185 mm x 120 mm x 120 mm)
Warranty	1 year
Optional Accessories	Carrying case, sensors (RS-220HR), SG-300 strobe guard

DIGITAL STROBOSCOPES

DT-315A

Portability via internal battery pack

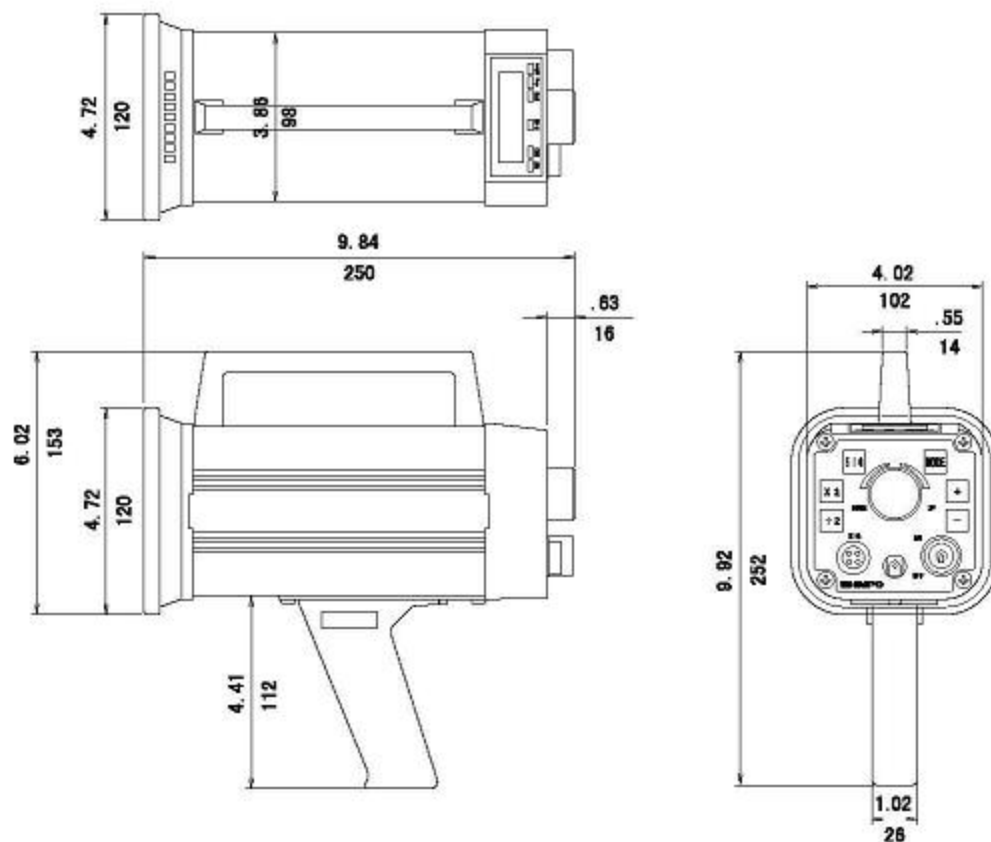
The microprocessor-controlled **DT-315A** possesses the same great features of the **DT-311A** with the added convenience of total portability via its own internal power supply with up to one hour of full time, high intensity flash rate. Powered by rechargeable batteries located inside its rugged aluminum housing, the **DT-315A** also performs as an AC line-powered strobe when plugged into its standard AC adapter/charger unit.



Features	Benefits
Extruded aluminum construction	Exceptional durability
Internal battery supply	Allows 4 hours of continuous duty on 1 charge
Continuous duty cycle	Prevents downtime waiting for unit to cool
Phase shift (in degrees of delay time)	Enables observer to focus on one particular area of rotating and/or reciprocating machinery
Repeatable accuracy ($\pm 0.01\%$ of reading)	Provides reliable measurement results
Microprocessor controlled	Assures stability in changing temperature environments
External trigger	Unit is automatically synchronized with equipment
Synchronous output	Enables unit to drive other strobes
Flash timer control	Extends flash to be life
Highly polished focused reflector	Eliminates "blind" viewing areas
Manual flash controller knob	Permits easy/accurate adjustments to flash rate
Fast recharge cycle	Minimizes downtime to only 2 hours



PRINTING QUALITY CONTROL
Check registration and color



SPECIFICATIONS

DT-311A

INTERNAL MODE				
Flashing Range	40.0 - 35,000 FPM (flashes per minute)			
Accuracy	±0.01 % of reading			
Resolution	0.1 FPM : 40.0 - 5,000 FPM	0.2 FPM : 5,000 - 8,000 FPM	0.5 FPM : 8,000 - 10,000 FPM	1 FPM : 10,000 - 35,000 FPM
Phase Shift	Use +/- push buttons (360° in 6 seconds)			
Display Update Time	0.2 seconds approx.			
Output Signal	Synchronous, 400 μsec. Pulse output, 0 to +12 VDC amplitude(approx.), 4.7 KΩ impedance			
Rate Multiplier/Divider	Multiply by 2, divide by 2			
EXTERNAL MODE				
Flashing Range	0.0 to 35,000 FPM			
Accuracy	±0.01 % ±1 digit			
Phase Shift	0 to 359° with 1° resolution			
Delay Time	0 to 2,000 μsec from 40 - 10,000 FPM			
External Trigger Input Signal	LO level : 0 - 0.8 VDC, HI level : 2.5 - 12 VDC or open collector (NPN), pulse width 50 μsec min.			
Input Impedance	4.7 KΩ to 12 V / 6.8 KΩ to 0 V			
GENERAL				
Display	5 digits, 0.4" (10 mm) high, LED			
Flash Tube Power/Life	Xenon, 10 W max. (100 million flashes)			
Flash Duration	10 - 40 μsec			
Sensor Power Supply	12 VDC (40 mA)			
Low Battery Indicator	Display shows all L's			
Battery Life	1 - 2 hours depending on flash rate			
Power Requirement	Internal battery pack			
Operating Temperature Range	32° - 104°F (0 - 40°C)			
Weight	4.4 lb (2 kg)			
Dimensions	9.84" L x 4.72" W x 4.72" H (250 mm x 120 mm x 120 mm)			
Warranty	1 year			
Standard Accessories	Fast charger			
Optional Accessories	Carrying case, sensors, SG-300 strobe guard			

SHIMPOINSTRUMENTS



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TECNICOS ESPECIALIZADOS

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