

The Digimatic DRO Line



Digimatic
DRO System

ADS-2 The Absolute
Digimatic DRO System

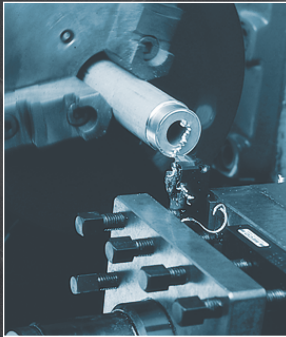


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*Mitutoyo's Digimatic DROs make your
machining more precise and productive!*

The new ADS-2 Absolute Digimatic DRO system

offers today's machine tool operators the precision of a digital positioning system at a low cost.



It includes Mitutoyo's patented Absolute Encoder capacitive technology, the "Set 'n Forget" system that allows the operator to set any origin point on the workpiece and always "remember" it, even after shut down.

Mitutoyo has enhanced its Digimatic DRO line with this new, more advanced system that features more flexibility in machine positioning and measuring.



Now this two tier system offers users the option of choosing the system that fits their needs more precisely, while still receiving the quality and affordability that Digimatic DRO technology offers.

You'll experience the ease and efficiency of digital readout convenience, but at a fraction of the usual cost. Ideal for milling operations, the ADS-2 Absolute Digimatic DRO series is also a great machine enhancement for drilling, boring and EDM applications.



Made in America – Los Angeles Factory

An important North American R&D operation, our Los Angeles Factory focuses on the development of new technological advances in measuring. The DRO manufacturing facility provides fast delivery for U.S. customers. This plant operates on the same high standards as Mitutoyo's Japan factories. Manufacturing and assembly at the Los

Angeles plant includes all sizes and types of DRO glass linear scales, counters, and MillStar CNC retrofit systems. SPC related products are also produced.

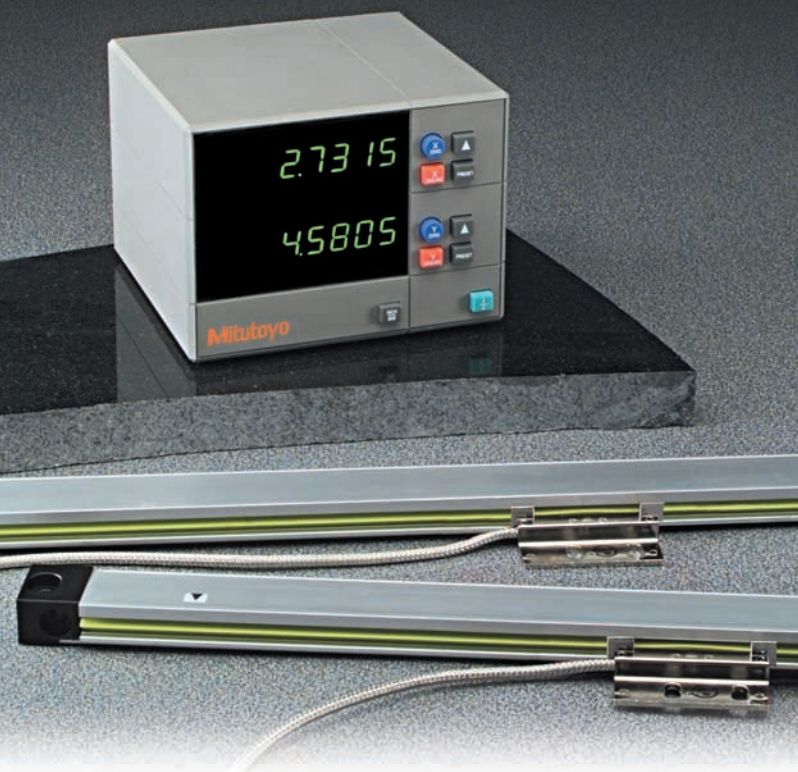


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Digimatic DRO System



For those users requiring a basic digital readout system for their mill, the Digimatic DRO System provides all the basic functions of an accurate, yet cost-effective, positioning system for machining. It features the following:

- Absolute and incremental modes for each axis
- Preset function to set a reference point of any value
- Battery back-up prevents loss of scale position and entered values
- High-tech capacitive system
- Inch or metric reading
- Reversible counting direction
- Machine error compensation
- Status indicators
- Pedestal mount for easy viewing

Digimatic DRO System ordering information

(Package includes: display, scales, arm and counter, tray, brackets)

Package		Order number
#1	13" x 30"	572-151
#2	13" x 36"	572-152
#3	16" x 36"	572-153
#4	16" x 30"	572-154

Digimatic DRO System specifications

Resolution:	.0005" / 0.01mm
Repeatability:	.0005" / 0.01mm
Maximum response speed:	40" / second
Display range:	-999.9995 to +999.9995" (-99,999.99 to +99,999.99mm)

Scale specifications

	572-125	572-127	572-132	572-134
Effective range:	13" (325mm)	16" (400mm)	30" (750mm)	36" (900mm)
Scale resolution:	0.0005" / 0.01mm	0.0005" / 0.01mm	0.0005" / 0.01mm	0.0005" / 0.01mm
Accuracy:	+/- .002" (0.05mm)	+/- .002" (0.05mm)	+/- .0025" (0.06mm)	+/- .0025" (0.06mm)
Max tracking speed:	40" /sec	40"/sec	40"/sec	40"/sec
Signal cable length:	10' (3m)	10' (3m)	10' (3m)	10' (3m)

Digimatic DRO System ordering information

Individual items	Order number
Display unit:	982-537A
Scales:	13" (325mm) 572-125
	16" (400mm) 572-127
	30" (750mm) 572-132
	36" (900mm) 572-134
Arm and display unit tray:	53AAA012
Bridgeport-type bracket kit:	53AAA014 (Package 1 and 2)
Lagun-type bracket kit:	53AAA013 (Package 3 and 4)
AC power supply:	50AAA297

Digimatic DRO System specifications

Digits:	Bright green LED, .56" high
Operating temperature:	0° C to 40° C (32° F to 104° F)
Storage temperature:	-20° C to 70° C (-4° F to 138° F)
Dimensions:	6.7" W x 5.1" H x 6.1" D
Weight:	2.7 lbs.

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The new ADS-2 Absolute Digimatic DRO Series offers new features and added capabilities for users needing a more powerful DRO system, yet remains economical. Selectable resolutions, a diameter mode, built-in timer and the absolute encoder "Set 'n Forget" technology makes this a highly functional DRO system. The ADS-2 incorporates the same high quality, superior Mitutoyo technology, along with some added user functions:

- Absolute encoder technology "Set 'n Forget" allows users to find part zero even after the power has been turned off
- Absolute and incremental modes for each axis
- Preset function to set a reference point of any value
- New Absolute Zero Set warning
- Reversible counting direction capability
- Machine tool error compensation
- Resolution programmable from front panel
- Diameter mode reflects the diameter of the workpiece being machined (e.g. lathe and grinder)
- Inch or metric reading
- Status indicators
- Timer display



Digimatic DRO System ordering information

(Package includes: 2 scales, display unit, mounting bracket)

Package		Order number
#1	12.8" x 29.5"	572-160
#2	12.8" x 35.4"	572-161
#3	15.7" x 35.4"	572-163
#4	15.7" x 29.5"	572-162

ADS-2 Specifications

Display resolution:	.0001" / 0.005mm;
(Selectable):	.0002" / 0.005mm; .0005" / 0.010mm
Maximum response speed:	40" / second
Display range:	-393.7007 to +393.7007" (-9999.995 to +9999.995mm)

Scale specifications (For additional scales up to 40" see the back page)

	572-155	572-156	572-157	572-158
Effective range:	12.8" (325mm)	15.7" (400mm)	29.5" (750mm)	35.4" (900mm)
Scale resolution:	0.0001" / 0.0025mm	0.0001" / 0.0025mm	0.0001" / 0.0025mm	0.0001" / 0.0025mm
Accuracy:	0.025 x (1 x Lo/1000) Lo = Effective range Unit = mm			
Max tracking speed:	40" /sec	40" /sec	40" /sec	40" /sec
Signal cable length:	10' (3m)	10' (3m)	10' (3m)	10' (3m)

ADS-2 The Absolute Digimatic DRO System



Digimatic DRO System ordering information

Individual items	Order number
Display unit:	982-538A
Scales:	
12.8" (325mm)	572-155
15.7" (400mm)	572-156
29.5" (750mm)	572-157
35.4" (900mm)	572-158
Display arm kit:	53AAB743
Bracket kit:	53AAB739 (Package 1 and 2) 53AAB740 (Package 3 and 4)

ADS-2 Specifications

Digits:	Bright green LED, .56" high
Operating temperature:	0° C to 40° C (32° F to 104° F)
Storage temperature:	-20° C to 70° C (-4° F to 138° F)
Dimensions:	6.92" W x 6.88" H x 3.58" D
Weight:	5.5 lbs.

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Advantages of the Absolute Digimatic DRO Display



The most obvious advantage of the Digimatic DRO Display is the increased ease with which machine tool operators can make measurements. The Absolute Digimatic DRO Display allows the origin to be set anywhere on the workpiece. Instead of adapting the coordinate system of the machine, the operators start at the point on the workpiece they find most convenient. This reduces the time spent transferring measurements from drawings. The Absolute Digimatic DRO Display also provides a display that is large, easy to read and precise; which eliminates the need to guess at measurements or rely on graduated dials.

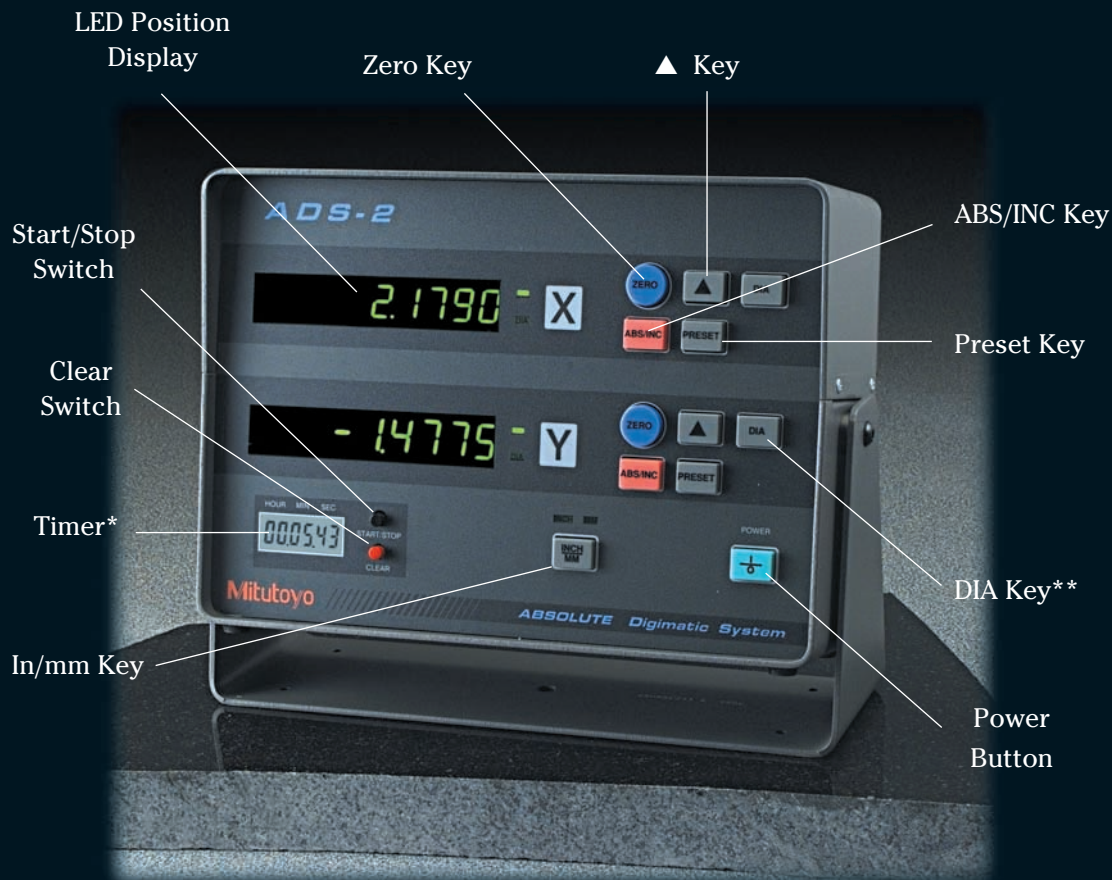
Absolute Digimatic DRO will always remember the scale (table) position even though the power is turned off.

Machine operator will never have to worry that his reference origin position will change for any reason, because DRO can always retrieve the absolute origin scale position.

For example: Operator sets up the workpiece origin anywhere and then sets the counter to zero. Display shows: X: 0.0000, Y: 0.0000. Press & hold (key and then Zero Key. Display shows: X: x.xxxx, Y: x.xxxx.

The position X & Y x.xxxx on the display is workpiece position that is relative to the absolute origin scale position.

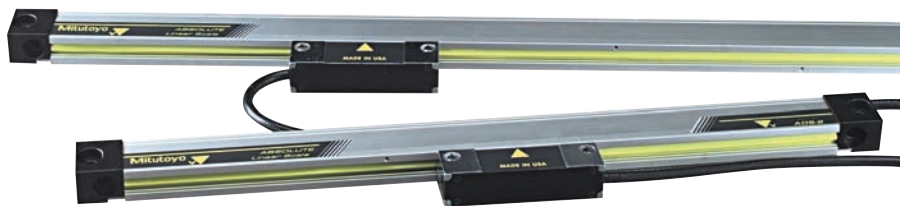
Absolute Digimatic scales also improve machine accuracy and repeatability. Because Absolute Digimatic scales directly measure the movement of the worktable, they bypass mechanical error such as lead screw error and backlash. The Digimatic DRO Display can compensate for inaccuracies in the worktable with its linear error compensation feature.



* Used to determine the time for making parts. Can run up to almost 100 hours.

** Used to toggle the Absolute Digimatic DRO display between one-to-one and diameter measurement mode.

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Additional ADS-2 Linear Scales

Order number	Effective range
572-164	3.94" (100mm)
572-165	4.92" (125mm)
572-166	5.91" (150mm)
572-167	7.88" (200mm)
572-168	9.85" (250mm)
572-169	11.82" (300mm)
572-155	12.80" (325mm)
572-170	13.78" (350mm)
572-156	15.75" (400mm)
572-171	17.72" (450mm)
572-172	19.69" (500mm)
572-173	23.63" (600mm)
572-174	27.56" (700mm)
572-157	29.53" (750mm)
572-175	31.50" (800mm)
572-158	35.43" (900mm)
572-176	39.37" (1000mm)

Technical Support
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