

ABSOLUTE Digimatic Scale Units

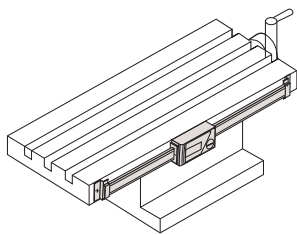
Designed to capture positional coordinates from slides on machine tools and precision instruments including semiconductor production equipment

SD ABSOLUTE Digimatic Scale Units SERIES 572

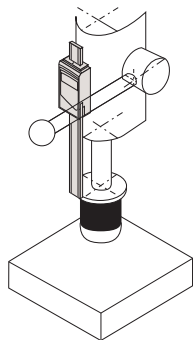


Applications

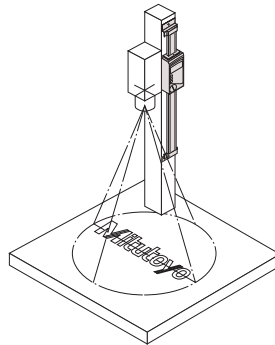
Machine table position



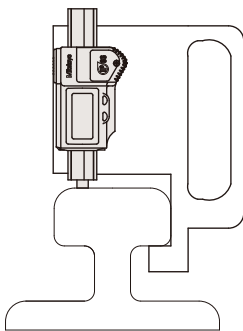
Drilling machine stroke position



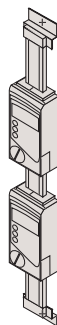
Focus setting on optical instruments



Special applications



As a measurement jig for outdoor use (SD-G)



Detector head mechanism

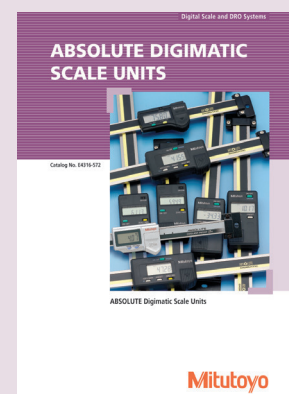
Please contact Mitutoyo for other special orders.

ABSOLUTE™ (Refer to page X for details.)

- SD series facilitates mounting on jigs, tools, and small machine tools to enable accurate positioning.
- Built-in absolute scale including the ABS point requires no zero-set every time the power is turned on. In addition, reliability has improved thanks to elimination of overspeed errors.
- Horizontal or vertical display according to the scale mounting direction.
- The dust resistance and the environmental resistance of the display has improved. The **SD-G** series offers dust/water protection level IP66.
- Long battery life for easier maintenance.
- **EC** counters are available as external display units.
- Equipped with an output port to transfer measurement data. This allows implementation in control systems and gaging systems.

Functions

- **ABS** (Absolute) measurement function
 - **INC** (Incremental) measurement function
 - Zero-setting function
 - Presetting function (2 preset values can be set. Not available for **SD-G**, **SD-D**, **SDV-D**)
 - Double reading function (Available only for **SD-F** or **SDV-F**)
 - Direction switch function
Not available for **SD-G**, **SD-D**, **SDV-D**, **SD-F**, **SDV-F**)
 - Hold function*
 - Measurement value composition error alarm
 - Low battery alarm
 - Output function
- * To activate the hold function when using **SD-D** or **SDV-D**, an optional hold unit is required. Simultaneous activation with the output function is not available. **SD-G** are also available to special order.
- * These units use 1.5V silver oxide cells for the power supply. Therefore, when the units are directly fixed to the frame of a machine tool that requires a high voltage, malfunction such as display digit fluctuations and errors may occur. The countermeasure examples are described in the user manuals provided.



Refer to the ABSOLUTE DIGIMATIC SCALE UNITS
(Catalog No.E4316) for more details.

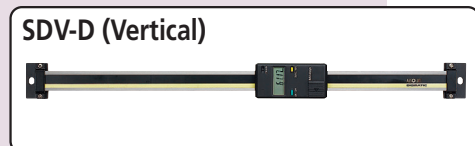
System Diagram

[Scale units]

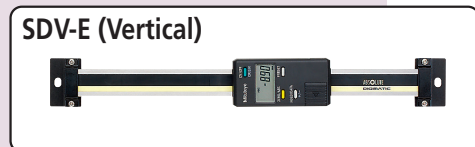
Single-function type with high dust/water resistance



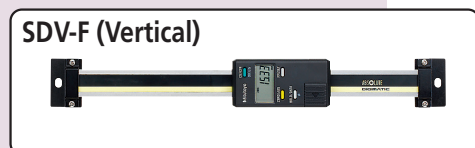
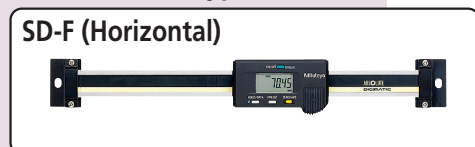
Single-function type



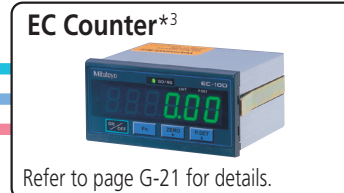
Multi-function type



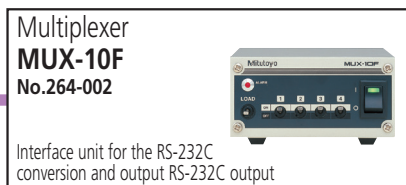
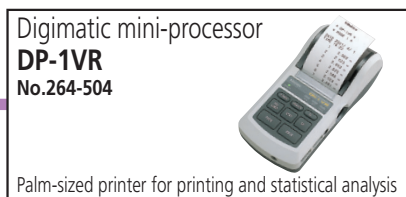
Multi-function type



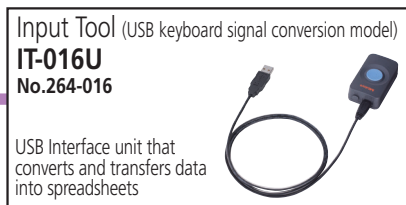
[Display units]



Tolerance judgment output*1



RS-232C output



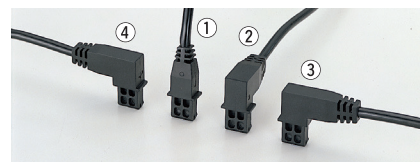
USB keyboard signal conversion

* Connection to an RS-232C conversion type (IT-007R) or a PS/2 keyboard signal conversion type (IT-005D) input tool is also available.

Connecting cable with the water-proof type output switch*2 1m : No.05CZA624
2m : No.05CZA625

Connecting cable with the output switch 1m : No.959149
2m : No.959150

Connecting cable with the output switch



① 1m : No.905338
2m : No.905409

② 1m : No.905689
2m : No.905690

③ 1m : No.905691
2m : No.905692

④ 1m : No.905693
2m : No.905694

Connecting cable 1m : No.936937
2m : No.965014

* 1: Select the tolerance judgment output or digimatic output when setting the parameters.
* 2: Connecting cable with the water-proof type output switch can be used only for **SD-G** or Water-proof Digital Caliper **CD-15/20/30PM** equipped with external output function.
* 3: Connecting of **SD** series and **DP-1VR/MUX-10F/IT-016U** is also available without passing through the EC counter.
In this case, connect these units and **SD** series with the cables used for the connection with the **EC** counter.

ABSOLUTE Digimatic Scale Units

Designed to capture positional coordinates from slides on machine tools and precision instruments including semiconductor production equipment

ABSOLUTE Digimatic Scale Units SERIES 572

SPECIFICATIONS

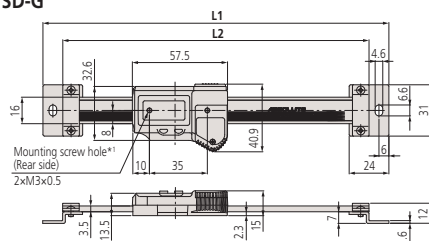
Type	Unit spec.	Order No.	Model	Range	Resolution	Accuracy	Repeatability	Battery life		
Horizontal single-function type (Water-proof type)	Metric	572-600	SD-10G	0-100mm	0.01mm	0.03mm	0.01mm	Approx. 13000 hours		
		572-601	SD-15G	0-150mm						
		572-602	SD-20G	0-200mm						
	Metric/Inch	572-613	SD-4"/10G	0-100mm/0-4"	0.0005"/0.01mm	0.03mm/.001"				
		572-614	SD-6"/15G	0-150mm/0-6"						
Horizontal single-function type	Metric	572-615	SD-8"/20G	0-200mm/0-8"	0.01mm	0.03mm	0.0005"/0.01mm	Approx. 20000 hours		
		572-200-20	SD-10DX	0-100mm						
		572-201-20	SD-15DX	0-150mm						
		572-202-20	SD-20DX	0-200mm						
	Metric/Inch	572-203-10	SD-30D	0-300mm	0.03mm/.001"					
		572-210-20	SD-4"DX	0-100mm/0-4"						
		572-211-20	SD-6"DX	0-150mm/0-6"						
		572-212-20	SD-8"DX	0-200mm/0-8"						
		572-213-10	SD-12"D	0-300mm/0-12"						
Horizontal multi-function type	Metric	572-460	SD-10E	0-100mm	0.01mm	0.03mm	0.01mm	Approx. 5000 hours		
		572-461	SD-15E	0-150mm						
		572-462	SD-20E	0-200mm						
		572-463	SD-30E	0-300mm						
		572-464	SD-45E	0-450mm						
		572-465	SD-60E	0-600mm						
		572-466	SD-80E	0-800mm						
		572-467	SD-100E	0-1000mm						
		572-470	SD-4"E	0-100mm/0-4"						
		572-471	SD-6"E	0-150mm/0-6"						
	Metric/Inch	572-472	SD-8"E	0-200mm/0-8"	0.0005"/0.01mm	0.03mm/.001"				
		572-473	SD-12"E	0-300mm/0-12"						
		572-474	SD-18"E	0-450mm/0-18"						
		572-475	SD-24"E	0-600mm/0-24"						
		572-476	SD-32"E	0-800mm/0-32"						
		572-477	SD-40"E	0-1000mm/0-40"						
		572-480-10*	SD-10F	0-100mm					0.01mm	0.03mm
		572-481-10*	SD-15F	0-150mm						
		572-482-10*	SD-20F	0-200mm						
		572-483-10*	SD-30F	0-300mm						
		572-484-10*	SD-45F	0-450mm						
		572-485-10*	SD-60F	0-600mm						
		572-486-10*	SD-80F	0-800mm						
		572-487-10*	SD-100F	0-1000mm						
		572-490-10*	SD-4"F	0-100mm/0-4"						
572-491-10*	SD-6"F	0-150mm/0-6"								
572-492-10*	SD-8"F	0-200mm/0-8"								
572-493-10*	SD-12"F	0-300mm/0-12"								
572-494-10*	SD-18"F	0-450mm/0-18"								
572-495-10*	SD-24"F	0-600mm/0-24"								
572-496-10*	SD-32"F	0-800mm/0-32"								
572-497-10*	SD-40"F	0-1000mm/0-40"								
Vertical single-function type	Metric	572-300-10	SDV-10D	0-100mm	0.01mm	0.03mm	0.01mm	Approx.20000 hours		
		572-301-10	SDV-15D	0-150mm						
		572-302-10	SDV-20D	0-200mm						
		572-303-10	SDV-30D	0-300mm						
	Metric/Inch	572-310-10	SD-4"D	0-100mm/0-4"	0.0005"/0.01mm	0.03mm/.001"				
		572-311-10	SD-6"D	0-150mm/0-6"						
		572-312-10	SD-8"D	0-200mm/0-8"						
		572-313-10	SD-12"D	0-300mm/0-12"						
		Vertical multi-function type	Metric	572-560					SDV-10E	0-100mm
572-561	SDV-15E			0-150mm						
572-562	SDV-20E			0-200mm						
572-563	SDV-30E			0-300mm						
572-564	SDV-45E			0-450mm						
572-565	SDV-60E			0-600mm						
572-566	SDV-80E			0-800mm						
572-567	SDV-100E			0-1000mm						
Metric/Inch	572-570		SDV-4"E	0-100mm/0-4"	0.0005"/0.01mm	0.03mm/.001"				
	572-571		SDV-6"E	0-150mm/0-6"						
	572-572		SDV-8"E	0-200mm/0-8"						
	572-573		SDV-12"E	0-300mm/0-12"						
	572-574		SDV-18"E	0-450mm/0-18"						
	572-575		SDV-24"E	0-600mm/0-24"						
	572-576		SDV-32"E	0-800mm/0-32"						
	572-577		SDV-40"E	0-1000mm/0-40"						
Vertical multi-function type (equipped with double reading function)	Metric	572-580-10*	SDV-10F	0-100mm	0.01mm	0.03mm	Approx.5000 hours			
		572-581-10*	SDV-15F	0-150mm						
		572-582-10*	SDV-20F	0-200mm						
		572-583-10*	SDV-30F	0-300mm						
		572-584-10*	SDV-45F	0-450mm						
		572-585-10*	SDV-60F	0-600mm						
		572-586-10*	SDV-80F	0-800mm						
	Metric/Inch	572-587-10*	SDV-100F	0-1000mm	0.0005"/0.01mm	0.03mm/.001"				
		572-590-10*	SDV-4"F	0-100mm/0-4"						
		572-591-10*	SDV-6"F	0-150mm/0-6"						
		572-592-10*	SDV-8"F	0-200mm/0-8"						
		572-593-10*	SDV-12"F	0-300mm/0-12"						
		572-594-10*	SDV-18"F	0-450mm/0-18"						
		572-595-10*	SDV-24"F	0-600mm/0-24"						
		572-596-10*	SDV-32"F	0-800mm/0-32"						
		572-597-10*	SDV-40"F	0-1000mm/0-40"						

* Available to special order
Note: Response speed is unlimited

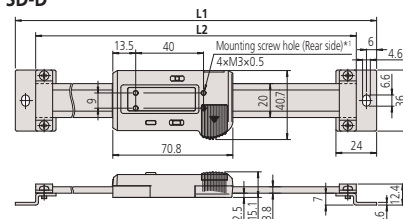
DIMENSIONS

Unit: mm

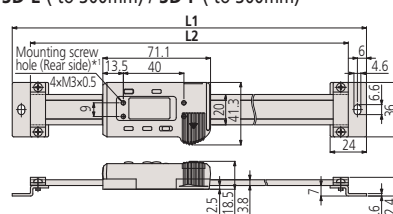
SD-G



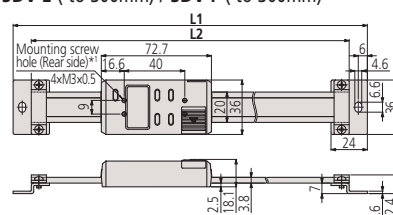
SD-D



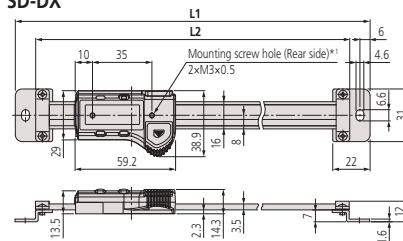
SD-E (to 300mm) / SD-F (to 300mm)



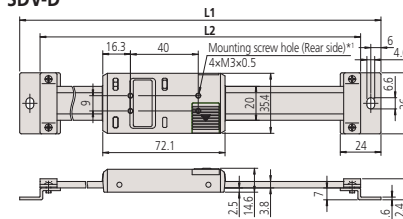
SDV-E (to 300mm) / SDV-F (to 300mm)



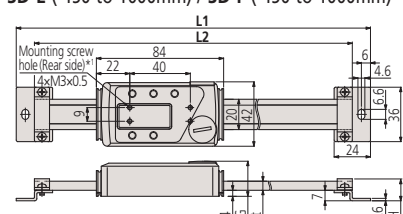
SD-DX



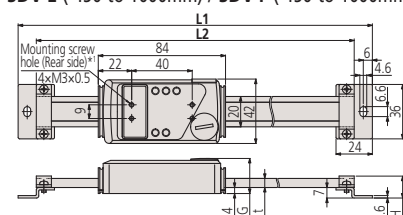
SDV-D



SD-E (450 to 1000mm) / SD-F (450 to 1000mm)



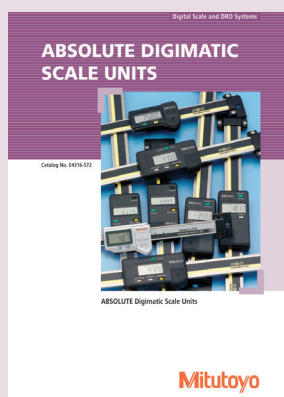
SDV-E (450 to 1000mm) / SDV-F (450 to 1000mm)



*1: Refer to the dimension table for details of the depth including the screw on the rear of the display.

SPECIFICATIONS

Model	Range (mm)	Dimensions(mm)					Depth including the screw on the rear of the display	Mass (g)
		L1	L2	t	G	H		
SD-G	100	209	185	—	—	—	Less than 2mm	390
	150	259	235	—	—	—		410
	200	311	287	—	—	—		430
SD-DX	100	209	185	—	—	—		230
	150	259	235	—	—	—		250
	200	311	287	—	—	—		270
SD-30D	300	444	420	—	—	—	Less than 2mm	370
	100	244	220	—	—	—		250
SD-E SD-F	150	294	270	—	—	—		280
	200	344	320	—	—	—		310
	300	444	420	—	—	—		370
	450	594	570	6	23.2	14.6	Less than 3mm	760
	600	774	750	10	27.2	18.6		900
	800	974	950	—	—	—		1710
	1000	1174	1150	—	—	—		2040
SDV-D	100	244	220	—	—	—	Less than 2mm	250
	150	294	270	—	—	—		280
	200	344	320	—	—	—		310
	300	444	420	—	—	—		370
	100	244	220	—	—	—	Less than 2mm	250
SDV-E SDV-F	150	294	270	—	—	—		280
	200	344	320	—	—	—		310
	300	444	420	—	—	—		370
	450	594	570	6	23.2	14.6	Less than 3mm	760
	600	774	750	10	27.2	18.6		900
	800	974	950	—	—	—		1710
	1000	1174	1150	—	—	—		2040



Refer to the ABSOLUTE DIGIMATIC SCALE UNITS (Catalog No.E4316) for more details.