

ABSOLUTE Digimatic Scale Units

Designed to accurately capture positional coordinates along an axis

SD ABSOLUTE Digimatic Scale Units SERIES 572



IP66 Horizontal single-function type (Water-proof type)
572-602 SD-20G



Horizontal single-function type
572-202-30 SD-20AX



Horizontal multi-function type
572-461 SD-15E



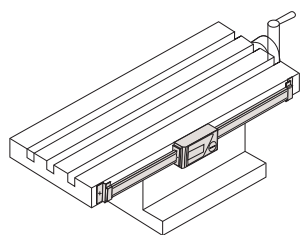
Vertical single-function type
572-303-10 SDV-30D



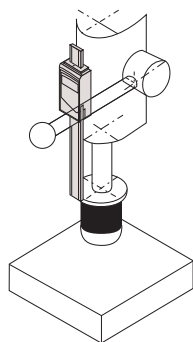
Vertical multi-function type
572-561 SDV-15E

Applications

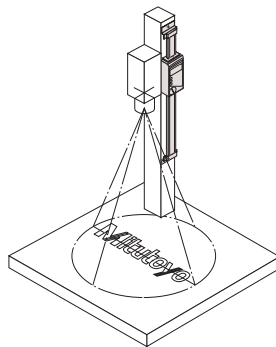
Machine table position



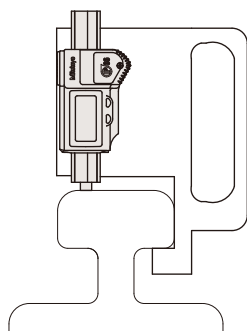
Drilling machine stroke position



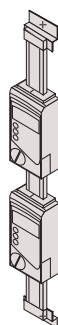
Focus setting on optical instruments



Special applications



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



Detector head mechanism

Please contact Mitutoyo for special applications.

ABSOLUTE™ (Refer to page H-26 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 does not require a 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, allowing implementation in control systems and gaging systems.

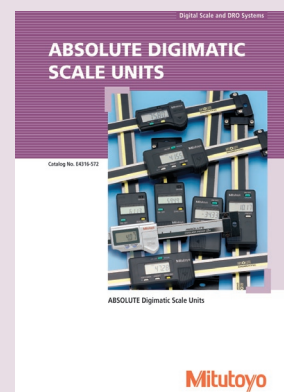
Functions

- **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-AX**, **SD-D**, **SDV-D**)
- Double reading function (Available only for **SD-F** or **SDV-F**)
- Direction switch function (Available only for **SD-E**, **SDV-E**)
- Hold function*
- Measurement value composition error alarm
- Low battery alarm
- Output function

* To activate the hold function when using **SD-AX**, **SD-D** or **SDV-D** models, an optional hold unit is required. Simultaneous activation with the output function is not available.

SD-G models 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, malfunctions such as display digit fluctuations and errors may occur. 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

SD-G (Horizontal)



*2

Single-function type

SD-AX (Horizontal)



* SD-30D for the measuring range of 300 mm.

SDV-D (Vertical)



Multi-function type

SD-E (Horizontal)



SDV-E (Vertical)



Multi-function type

SD-F (Horizontal)



SDV-F (Vertical)



[Display units]

EC Counter^{*3}



Refer to page G-15 for details.

Tolerance judgment output^{*1}

Digimatic mini-processor
DP-1VA LOGGER
264-505

Palm-sized printer for printing
and statistical analysis



Multiplexer
MUX-10F
264-002

Interface unit for the RS-232C
conversion and output RS-232C output



RS-232C output

Input Tool (USB keyboard signal conversion model)
IT-016U
264-016-10

USB Interface unit that
converts and transfers data
into spreadsheets



USB keyboard
signal conversion

* Connection to an RS-232C conversion type (IT-007R)
input tool is also available.

Measurement Data Wireless Communication System
U-WAVE

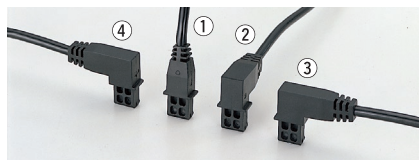
The data output from the SD series can be sent to the
computer by wireless communication without using the
EC counter. Refer to pages A-17 to A-19 for details.

USB keyboard
signal conversion

Connecting cable with the water-proof type output switch^{*2} 1 m : **05CZA624**
2 m : **05CZA625**

Connecting cable with the output switch 1 m : **959149**
2 m : **959150**

Connecting cable with the output switch



① 1 m : **905338** ③ 1 m : **905691**
2 m : **905409** 2 m : **905692**

② 1 m : **905689** ④ 1 m : **905693**
2 m : **905690** 2 m : **905694**

Connecting cable 1 m : **936937**
2 m : **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 equipped with the external output function.

*3: Connecting of SD series and DP-1VA LOGGER/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 connection with the EC counter.

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ABSOLUTE Digimatic Scale Units SERIES 572

SPECIFICATIONS

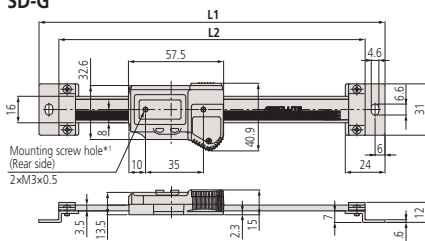
Type	Unit spec.	Order No.	Model	Range	Resolution	Accuracy	Repeatability	Battery life					
Horizontal single-function type (Water-proof type)	Metric	572-600	SD-10G	0-100 mm	0.01 mm	0.03 mm	0.01 mm	Approx. 13000 hours					
		572-601	SD-15G	0-150 mm									
		572-602	SD-20G	0-200 mm									
	Metric/Inch	572-613	SD-4" /10G	0-100 mm / 0-4 in	0.0005 in /0.01 mm	0.03 mm / 0.001 in							
		572-614	SD-6" /15G	0-150 mm / 0-6 in									
572-615		SD-8" /20G	0-200 mm / 0-8 in										
Horizontal single-function type	Metric	572-200-30	SD-10AX	0-100 mm	0.01 mm	0.03 mm	0.0005 in /0.01 mm	Approx. 18000 hours					
		572-201-30	SD-15AX	0-150 mm				0.04 mm	Approx. 20000 hours				
		572-202-30	SD-20AX	0-200 mm		0.03 mm / 0.001 in							
		572-203-10	SD-30D	0-300 mm				0.04 mm / 0.002 in	Approx. 18000 hours				
	Metric/Inch	572-210-30	SD-4" AX	0-100 mm / 0-4 in	0.0005 in /0.01 mm				0.03 mm / 0.001 in	Approx. 20000 hours			
		572-211-30	SD-6" AX	0-150 mm / 0-6 in									
		572-212-30	SD-8" AX	0-200 mm / 0-8 in									
		572-213-10	SD-12" D	0-300 mm / 0-12 in									
		Horizontal multi-function type	Metric	572-460		SD-10E	0-100 mm	0.01 mm			0.03 mm	0.01 mm	Approx. 5000 hours
				572-461		SD-15E	0-150 mm						
572-462	SD-20E			0-200 mm									
572-463	SD-30E			0-300 mm									
572-464	SD-45E			0-450 mm	0.04 mm								
572-465	SD-60E			0-600 mm									
572-466	SD-80E			0-800 mm									
572-467	SD-100E			0-1000 mm									
Metric/Inch	572-470		SD-4" E	0-100 mm / 0-4 in	0.0005 in/0.01 mm	0.03 mm / 0.001 in							
	572-471		SD-6" E	0-150 mm / 0-6 in									
	572-472	SD-8" E	0-200 mm / 0-8 in										
	572-473	SD-12" E	0-300 mm / 0-12 in	0.04 mm / 0.002 in									
	572-474	SD-18" E	0-450 mm / 0-18 in										
	572-475	SD-24" E	0-600 mm / 0-24 in				0.05 mm / 0.002 in						
572-476	SD-32" E	0-800 mm / 0-32 in	0.06 mm / 0.0025 in										
572-477	SD-40" E	0-1000 mm / 0-40 in		0.07 mm / 0.0025 in									
Horizontal multi-function type (equipped with double reading function)	Metric	572-480-10*	SD-10F	0-100 mm	0.01 mm	0.03 mm	0.01 mm	Approx. 5000 hours					
		572-481-10*	SD-15F	0-150 mm									
		572-482-10*	SD-20F	0-200 mm									
		572-483-10*	SD-30F	0-300 mm									
		572-484-10*	SD-45F	0-450 mm		0.04 mm							
		572-485-10*	SD-60F	0-600 mm									
		572-486-10*	SD-80F	0-800 mm									
		572-487-10*	SD-100F	0-1000 mm									
	Metric/Inch	572-490-10*	SD-4" F	0-100 mm / 0-4 in	0.0005 in/0.01 mm	0.03 mm / 0.001 in							
		572-491-10*	SD-6" F	0-150 mm / 0-6 in									
		572-492-10*	SD-8" F	0-200 mm / 0-8 in		0.04 mm / 0.002 in							
		572-493-10*	SD-12" F	0-300 mm / 0-12 in									
		572-494-10*	SD-18" F	0-450 mm / 0-18 in									
		572-495-10*	SD-24" F	0-600 mm / 0-24 in									
		572-496-10*	SD-32" F	0-800 mm / 0-32 in		0.05 mm / 0.002 in							
		572-497-10*	SD-40" F	0-1000 mm / 0-40 in					0.06 mm / 0.0025 in				
		0.07 mm / 0.0025 in											
		Vertical single-function type	Metric	572-300-10		SDV-10D			0-100 mm	0.01 mm	0.03 mm	0.01 mm	Approx. 20000 hours
572-301-10	SDV-15D			0-150 mm									
572-302-10	SDV-20D			0-200 mm	0.04 mm								
572-303-10	SDV-30D			0-300 mm									
Metric/Inch	572-310-10		SD-4" D	0-100 mm / 0-4 in	0.0005 in/0.01 mm	0.03 mm / 0.001 in							
	572-311-10		SD-6" D	0-150 mm / 0-6 in									
	572-312-10		SD-8" D	0-200 mm / 0-8 in			0.04 mm / 0.002 in						
	572-313-10		SD-12" D	0-300 mm / 0-12 in									
Vertical multi-function type	Metric	572-560	SDV-10E	0-100 mm	0.01 mm	0.03 mm	0.01 mm	Approx. 5000 hours					
		572-561	SDV-15E	0-150 mm									
		572-562	SDV-20E	0-200 mm									
		572-563	SDV-30E	0-300 mm									
		572-564	SDV-45E	0-450 mm		0.04 mm							
		572-565	SDV-60E	0-600 mm									
		572-566	SDV-80E	0-800 mm									
		572-567	SDV-100E	0-1000 mm									
	Metric/Inch	572-570	SDV-4" E	0-100 mm / 0-4 in	0.0005 in/0.01 mm	0.03 mm / 0.001 in							
		572-571	SDV-6" E	0-150 mm / 0-6 in									
		572-572	SDV-8" E	0-200 mm / 0-8 in		0.04 mm / 0.002 in							
		572-573	SDV-12" E	0-300 mm / 0-12 in									
		572-574	SDV-18" E	0-450 mm / 0-18 in									
		572-575	SDV-24" E	0-600 mm / 0-24 in									
		572-576	SDV-32" E	0-800 mm / 0-32 in		0.05 mm / 0.002 in							
		572-577	SDV-40" E	0-1000 mm / 0-40 in					0.06 mm / 0.0025 in				
		0.07 mm / 0.0025 in											
		Vertical multi-function type (equipped with double reading function)	Metric	572-580-10*		SDV-10F			0-100 mm	0.01 mm	0.03 mm	0.01 mm	Approx. 5000 hours
572-581-10*	SDV-15F			0-150 mm									
572-582-10*	SDV-20F			0-200 mm	0.04 mm								
572-583-10*	SDV-30F			0-300 mm									
572-584-10*	SDV-45F			0-450 mm		0.05 mm							
572-585-10*	SDV-60F			0-600 mm									
572-586-10*	SDV-80F			0-800 mm	0.06 mm								
572-587-10*	SDV-100F			0-1000 mm			0.07 mm						
Metric/Inch	572-590-10*		SDV-4" F	0-100 mm / 0-4 in	0.0005 in/0.01 mm	0.03 mm / 0.001 in							
	572-591-10*		SDV-6" F	0-150 mm / 0-6 in									
	572-592-10*		SDV-8" F	0-200 mm / 0-8 in		0.04 mm / 0.002 in							
	572-593-10*		SDV-12" F	0-300 mm / 0-12 in									
	572-594-10*		SDV-18" F	0-450 mm / 0-18 in									
	572-595-10*		SDV-24" F	0-600 mm / 0-24 in									
	572-596-10*		SDV-32" F	0-800 mm / 0-32 in		0.05 mm / 0.002 in							
	572-597-10*		SDV-40" F	0-1000 mm / 0-40 in			0.06 mm / 0.0025 in						
0.07 mm / 0.0025 in													

* Available to special order

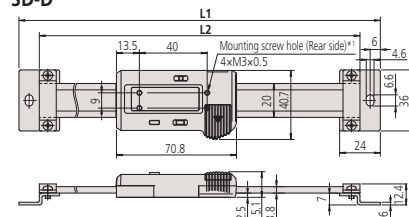
DIMENSIONS

Unit: mm

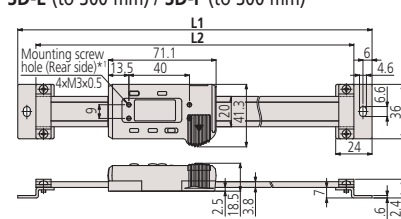
SD-G



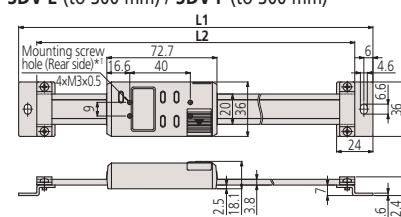
SD-D



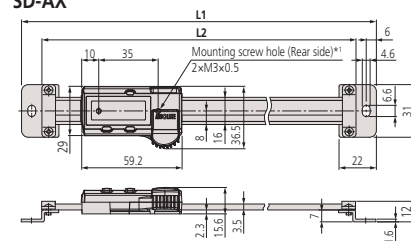
SD-E (to 300 mm) / SD-F (to 300 mm)



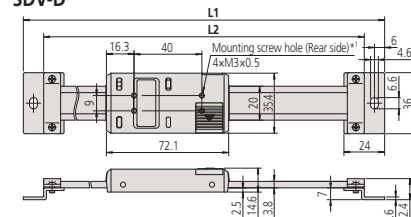
SDV-E (to 300 mm) / SDV-F (to 300 mm)



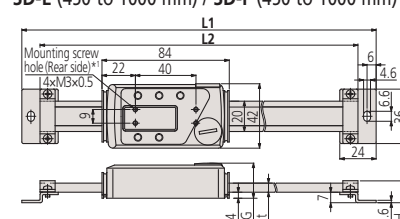
SD-AX



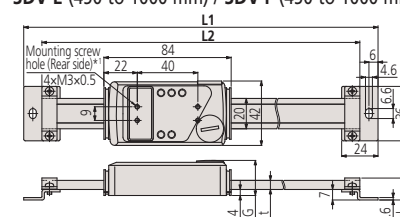
SDV-D



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



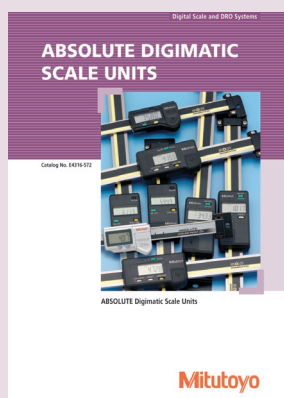
SDV-E (450 to 1000 mm) / SDV-F (450 to 1000 mm)



*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 2 mm	390
	150	259	235	—	—	—		410
	200	311	287	—	—	—		430
SD-AX	100	209	185	—	—	—		235
	150	259	235	—	—	—		255
	200	311	287	—	—	—		275
SD-30D	300	444	420	—	—	—	Less than 2 mm	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 3 mm	760
	600	774	750	10	27.2	18.6		900
SDV-D	800	974	950	—	—	—		1710
	1000	1174	1150	—	—	—		2040
	100	244	220	—	—	—	Less than 2 mm	250
	150	294	270	—	—	—		280
	200	344	320	—	—	—		310
SDV-E SDV-F	300	444	420	—	—	—		370
	100	244	220	—	—	—	Less than 2 mm	250
	150	294	270	—	—	—		280
	200	344	320	—	—	—		310
	300	444	420	—	—	—		370
SDV-E SDV-F	450	594	570	6	23.2	14.6	Less than 3 mm	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.