

Micrometer Head

The origin of Mitutoyo's trustworthy brand of small tool instruments

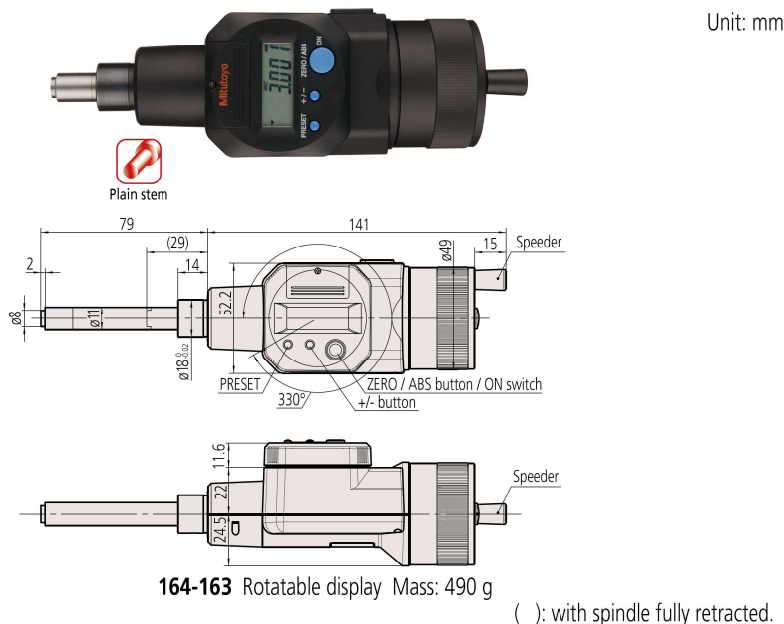
Digimatic Micrometer Heads SERIES 164, 350

- Equipped with digital display and output.
- **MHN-MX (IP65)/MXN (IP65)** are protection grade IP65, waterproof Digimatic micrometer heads.
- Allows integration into statistical process control and measurement systems for models with measurement data output connector.

DIMENSIONS

Plain Stem

Unit: mm



SPECIFICATIONS

Metric								
Order No.	Stroke (mm)	Resolution (mm)	Graduation (mm)	Stem	Stem dia. (mm)	Spindle end	Graduation features	Maximum permissible error J_{MPE} (μm)
164-163	50	0.001	—	Plain	18	Flat (carbide tip)	—	±3
350-251-30* ¹	25		0.01		W/clamp nut			
350-252-30* ¹				Plain				
350-253-30* ¹				W/clamp nut	12	Flat (carbide tip)		
350-254-30* ¹				Plain			Spherical (SR4) (carbide tip)	
350-281-30* ²				W/clamp nut				Flat
350-282-30* ²				Plain				
350-283-30* ²				W/clamp nut				
350-284-30* ²				Plain				
350-261-30* ²								

*1 These models are not water-proof.

*2 IP65 dust / water protection type. Stem diameter of IP65 type is 12 mm.

Note: For functional details of series 350 refer to page B-8. Origin setting is by presetting.

Inch / Metric									
Order No.	Stroke (in)	Resolution	Graduation	Stem	Stem dia. (in)	Spindle end	Graduation features	Maximum permissible error J_{MPE} (in)	
164-164	2	0.00005 in/ 0.001 mm	—	Plain	0.709	Flat (carbide tip)	Standard	±0.0001	
350-351-30* ¹	1		0.001 in/ 0.01 mm		W/clamp nut				0.375
350-352-30* ¹				Plain					
350-353-30* ¹				W/clamp nut	0.5	Flat (carbide tip)			
350-354-30* ¹				Plain					Spherical (SR4) (carbide tip)
350-381-30* ²				W/clamp nut					
350-382-30* ²				Plain					
350-383-30* ²				W/clamp nut					
350-384-30* ²				Plain					
350-361-30* ²									

*1 These models are not water-proof.

*2 IP65 dust / water protection type. Stem diameter of IP65 type is 12 mm.

Note: For functional details of series 350 refer to page B-8. Origin setting is by presetting.



These marks indicate that a product has successfully passed IP65-level testing, which is carried out by the independent German certification organization TÜV Rheinland.



IP Codes (series 350*)

Level 6: Dustproof No ingress of dust allowed.

Level 5: Protected against water jets.

Water projected in jets against the enclosure from any direction shall have no harmful effects.

Technical Data

- Battery for series 350
SR44 (1 pc.), 938882 for initial operation checks (standard accessory)
- Battery for series 164
SR44 (2 pcs.), 938882 for initial operation checks (standard accessory)
- Battery life: Approx. 2.4 years under normal use (for series 350-XXX)
Approx. 1.8 years under normal use (for series 164-163, 164)
- Length standard: Electromagnetic rotary sensor
Spanner (301336), 1 pc. (for series 350-XXX)
Screwdriver (No.05CAA952), 1 pc. (for series 164-163, 164)
- * IP65 dust/water protection type

Functions (series 164)

Origin point setting (ABS measurement system): Resets the ABS origin at the current spindle position to the minimum value of the measuring stroke and switches to ABS mode.

Zero-setting (INC measurement system):

A brief press on the ZERO/ABS button sets display to zero at the current spindle position and switches to the incremental (INC) measuring mode. A longer press resets to the ABS measuring mode.

Data output:

Equipped with output port for transferring measurement data to a Statistical Process Control (SPC) and measurement system.

Auto power ON/OFF:

The reading on the LCD disappears after this instrument is idle for about 20 minutes, but the reading and measurement mode are retained. Turning the spindle causes the reading on the LCD to reappear.

Error alarm:

In case of an overflow on the LCD or a computing error, an error message appears on the LCD and the measuring function stops. This prevents an instrument from giving an erroneous reading. Also, when the battery voltage drops to a certain level, the low-battery-voltage alarm annunciator appears well before the micrometer becomes unusable.

Optional Accessories

- Connecting cables for series 164
1 m: 959149
2 m: 959150
- USB Input Tool Direct
USB-ITN-C (2 m): 06AFM380C
02AZD790C 160 mm
For foot switch: 02AZE140C
- Connecting cables for series 350
1 m: 05CZA662
2 m: 05CZA663
- USB Input Tool Direct
USB-ITN-B (2 m): 06AFM380C

Wireless Data Output* U-WAVE

- U-WAVE-TM 264-622 (IP67 type)
264-623 (Buzzer type)
- U-WAVE-TMB Transmitter
Mitutoyo Bluetooth® U-WAVE
264-626 (IP67 type) 264-627 (Buzzer type)
Refer to page A-16 for details.
- Connecting unit for U-WAVE-TM/TMB
02AZF310 (IP67/buzzer type common specification)
Refer to pages A-16 and A-18 for details.
- * Cannot be used with 164-163 and 164-164

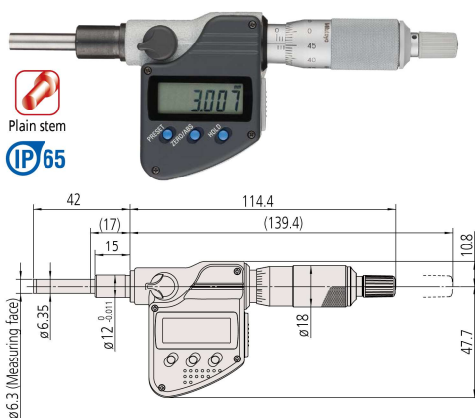
Technical Data

- Measuring face
Material: Carbide
Hardness: 90 HRA or more
Lapped
- Scale finishing:
Satin-chrome plated

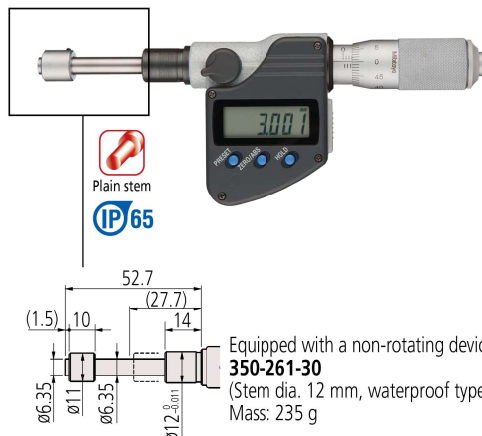
DIMENSIONS

Plain Stem

Unit: mm



350-281-30 (Stem dia. 12mm, waterproof type) Mass: 230 g

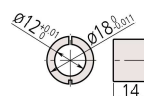


Equipped with a non-rotating device
350-261-30
(Stem dia. 12 mm, waterproof type)
Mass: 235 g



Spherical face
350-283-30

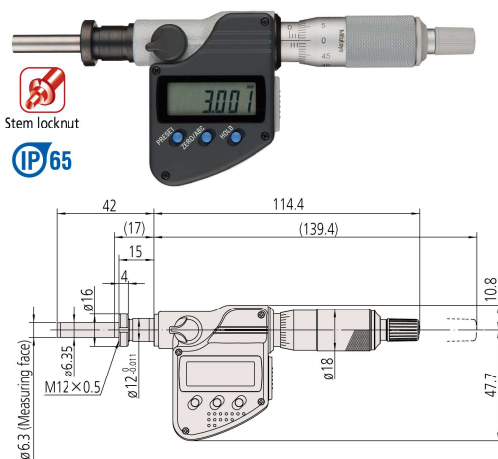
SR4 *1



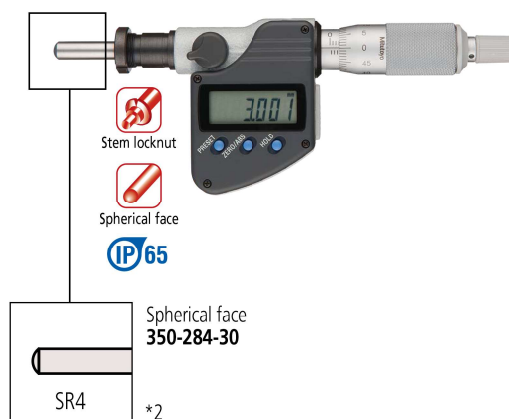
Bush (standard accessory)
350-261-30

*1 Other dimensions are the same as **350-281-30**.
(): with spindle fully retracted.

Stem locknut



• Fixture thickness: 11.5 mm
350-282-30 (Stem dia. 12 mm, equipped with locknut, waterproof type) Mass: 230 g



Spherical face
350-284-30

SR4 *2

*2 Other dimensions are the same as **350-282-30**.
(): with spindle fully retracted.

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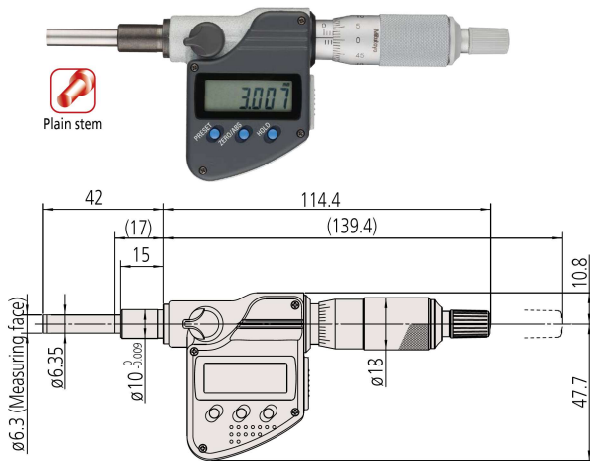
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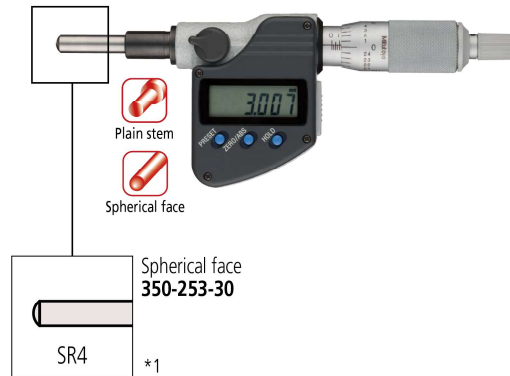
DIMENSIONS

Plain Stem

Unit: mm

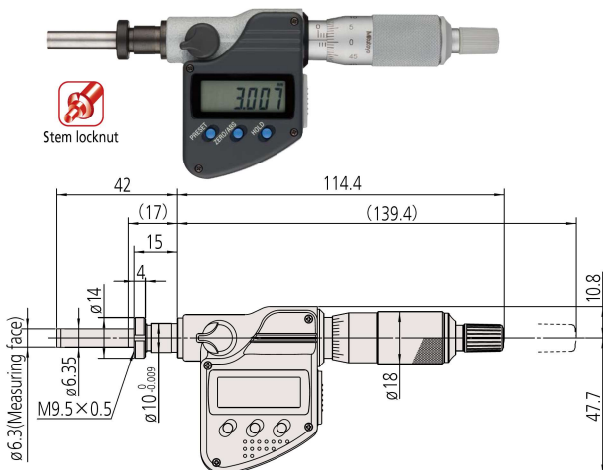


350-251-30
(Stem dia. 10 mm, for general use) Mass: 230 g

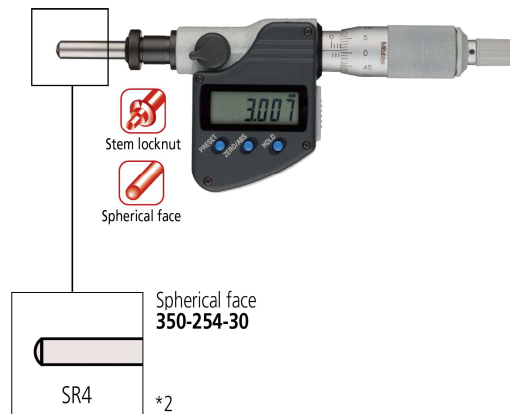


*1 Other dimensions are the same as **350-251-30**.
(): with spindle fully retracted.

Stem Locknut



• Fixture thickness: 11.5 mm
350-252-30
(Stem dia. 10 mm, for general use) Mass: 230 g



*2 Other dimensions are the same as **350-252-30**.
(): with spindle fully retracted.