

## Datasheet

Electronic meter counter with measuring wheel rotated by 90 degrees.

### Features at a glance

- Electronic length measuring system including electronic measuring display.
- Meter counter with measuring wheel rotated by 90 degrees.
- Measurement of linear movements directly on the surface of running materials.
- Individual adaptation possibilities through different measuring wheel sizes (up to 500 mm/revolution) offer numerous applications in various machine industries.
- Incremental magnetic sensor or magnetic ring for rotary distance measurement (length).
- Robust design with easy replacement of the measuring wheels.
- Programmable measuring display: counting direction, change between incremental and absolute measurement, scaling factor adjustable, changeable units / resolution, conversion from cm to inch.
- Supply battery-powered or with external power supply.
- Measuring display directly attached or externally in an installation or mounting housing.



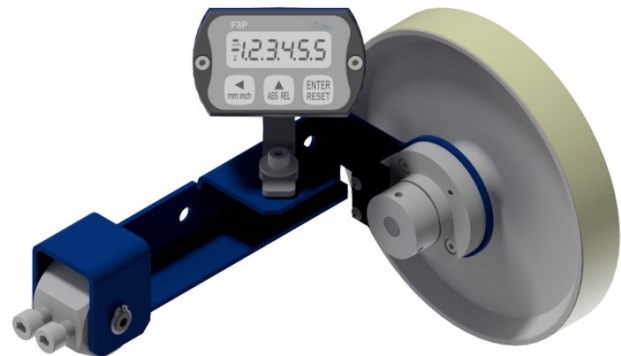
Depending on the application, we offer you the electronic meter counter in a wide variety of designs with customer-specific options.

### Standard variant Example

Electronic meter counter with programmable measuring display, direct mounting and measuring wheel with 500 mm circumference

#### MZ/E-L90-B-F8P/DA-P-X-500/G

- Measuring wheel rotated by 90 degrees
- Measuring display F8P (battery-powered), direct mounting in mounting housing
- Magnetic sensor with magnetic ring
- Resolution programmable
- Measuring wheel with 500 mm circumference, tread PU, smooth, vulcanized, corpus aluminium

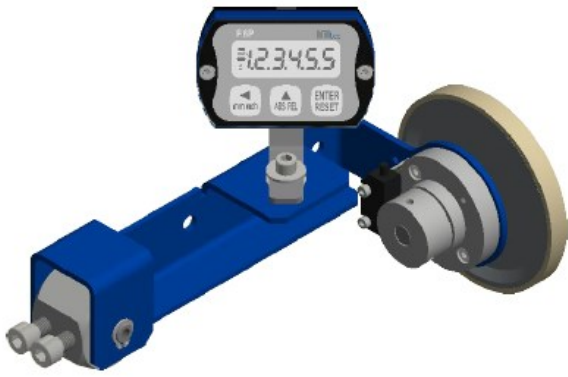


# Datasheet

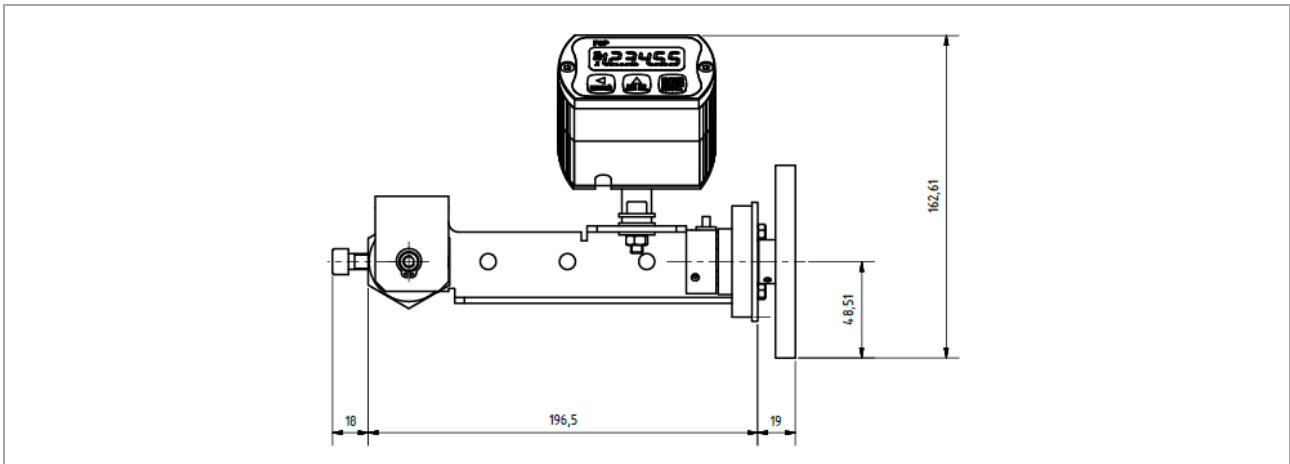
## Standard variants Examples

### MZ/E Light 90 Degrees

Electronic meter counter with programmable measuring display, direct mounting and measuring wheel with 200 mm circumference

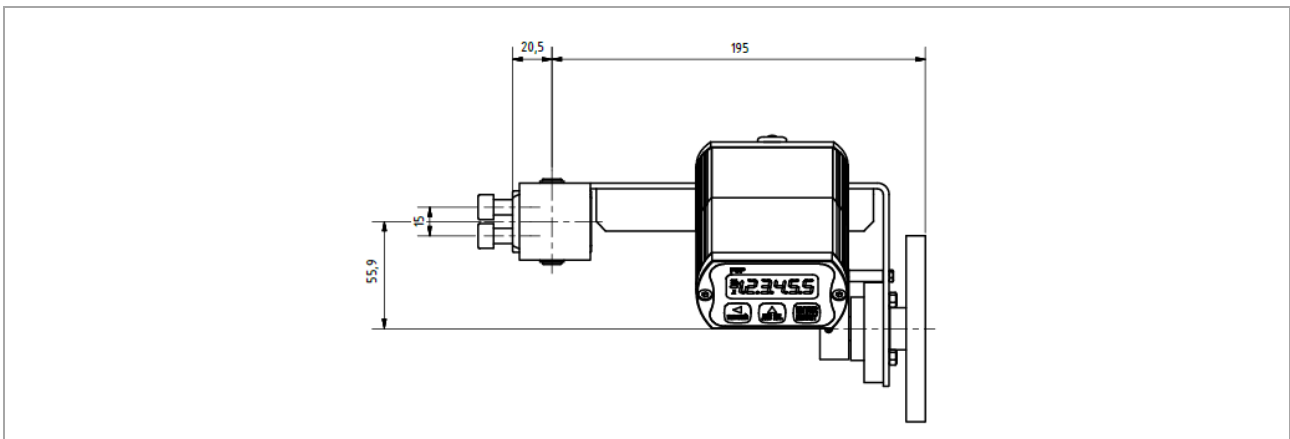
MZ/E-L90-B-F8P/DA-P-X-200/G	
<ul style="list-style-type: none"> <li>• Measuring wheel rotated by 90 degrees</li> <li>• Measuring display F8P (battery-powered), direct mounting in mounting housing</li> <li>• Magnetic sensor with magnetic ring</li> <li>• Resolution programmable</li> <li>• Measuring wheel with 200 mm circumference, tread PU, smooth, vulcanized, corpus aluminium</li> </ul>	 <p style="text-align: right;">Art. No.: 19019</p>

## Dimensions



Measuring wheel rotated by 90 degrees

Side view




All dimensions in [mm]

Top view

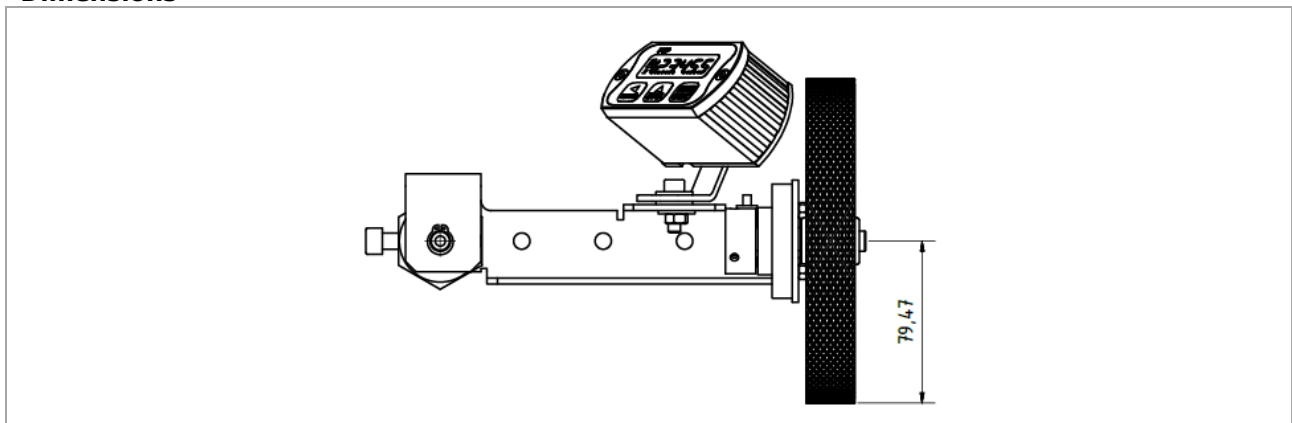
# Datasheet

## MZ/E Light 90 Degrees

Electronic meter counter with programmable measuring display, direct mounting and measuring wheel with 500 mm circumference

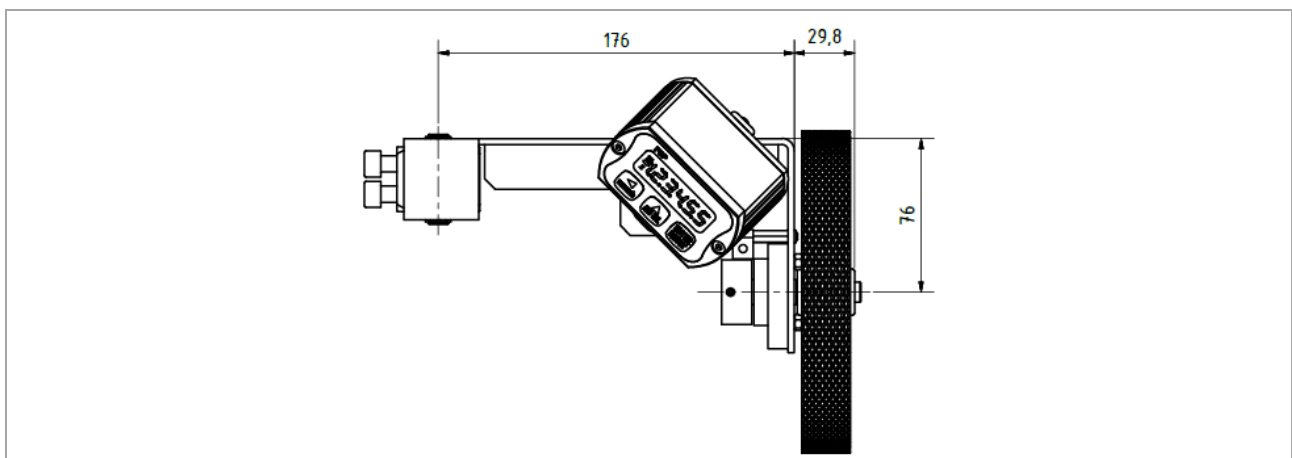
<p><b>MZ/E-L90-B-F8P/DA-P-X-500/GR</b></p>	 <p>Art. No.: 32638</p>
<ul style="list-style-type: none"> <li>• Measuring wheel rotated by 90 degrees</li> <li>• Measuring display F8P (battery-powered), direct mounting in mounting housing</li> <li>• Magnetic sensor with magnetic ring</li> <li>• Resolution programmable</li> <li>• Measuring wheel with 500 mm circumference, tread rubber, knurled, corpus aluminium</li> </ul>	

### Dimensions



Measuring wheel rotated by 90 degrees

Side view



All dimensions in [mm]

Top view



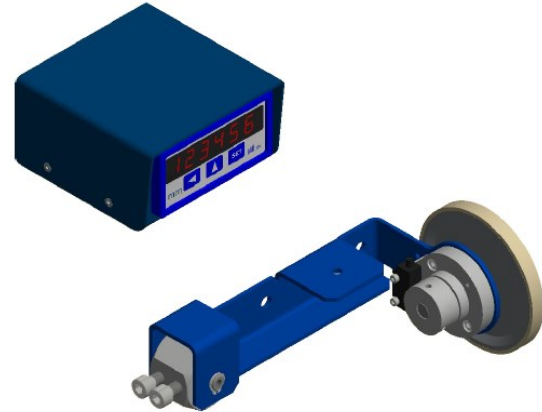
# Datasheet

## MZ/E Light 90 Grad

Electronic meter counter with remote programmable measuring display and measuring wheel with 200 mm circumference

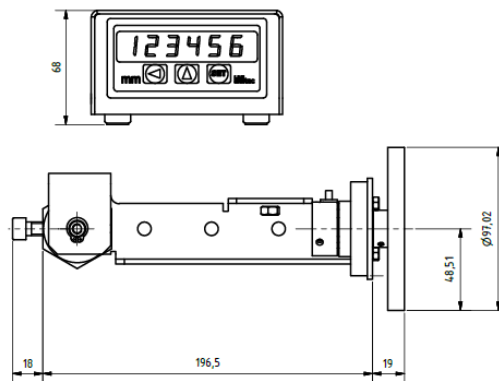
### MZ/E-L90-230-EP2/FA-P-2.0-200/G

- Measuring wheel rotated by 90 degrees
- Measuring display EP2 (230 VAC) programmable, remote display in mounting housing, cable length 2 m
- Magnetic sensor with magnetic ring
- Measuring wheel with 200 mm circumference, tread PU, smooth, vulcanized, corpus aluminium



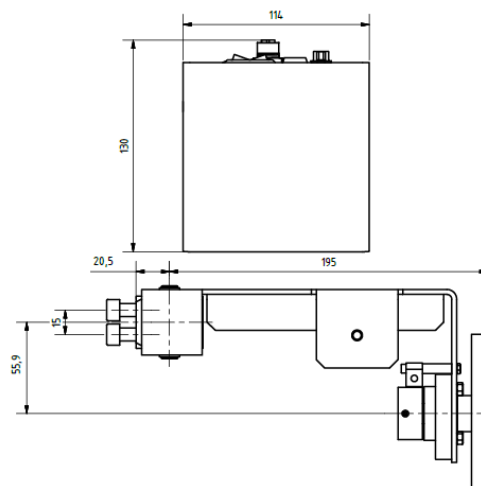
Art. No.: 29990

### Dimensions



Measuring wheel rotated by 90 degrees

Side view



All dimensions in [mm]

Top view

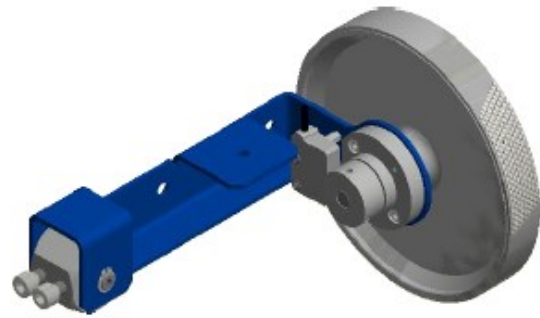
# Datasheet

## MZ/E Light 90 Grad

Electronic meter counter without measuring display, with magnetic sensor and magnetic ring  
And measuring wheel with 500 mm circumference

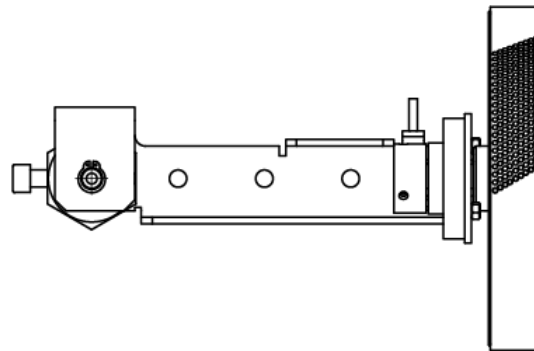
### MZ/E-L90-24-LHR5/Y-250-2.0-500/N

- Measuring wheel rotated by 90 degrees
- (24 VDC)
- Magnetic sensor type LHR5/1, output signal: Push Pull  
Resolution: 250 pulses/revolution
- Cable length 2 m
- Measuring wheel with 500 mm circumference, tread PU, studded, vulcanized, corpus aluminium



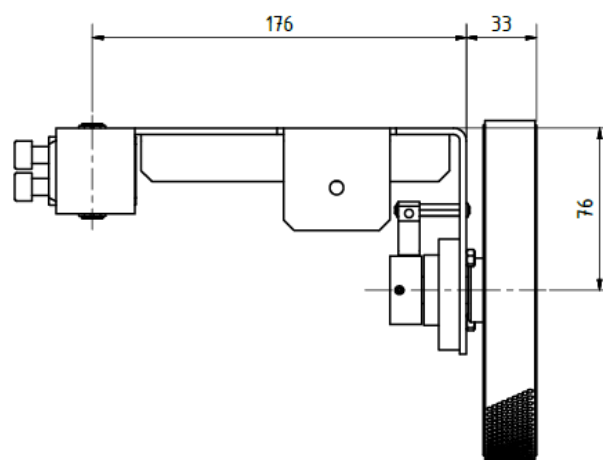
Art. No.: 33269

### Dimensions



Measuring wheel rotated by 90 degrees

Side view



All dimensions in [mm]

Top view



For information on mechanical and electrical characteristics, see page 6.  
The order code for other designs can be found on pages 8 and 9.



# Datasheet

## Mechanical characteristics

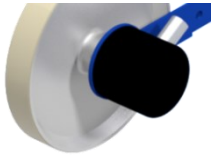

Measuring wheel			
Circumference [C]	200 mm	304,8 mm (=12 Inches)	500 mm
Drilling	Ø10 mm		
Material	Blank Surface	Aluminium Aluminium [R]; Polyurethane [G; RI; N]; Rubber [GG; GR]	

Measuring system	
Weight	approx. 1,0 - 1,5 kg depending on design
Repeatability	±0,4 %
Measuring speed	< 400 m/min

## Electrical characteristics

Measuring system	
Interface	RS485 (SUBD9; 9 pins); only with external power supply
Port DA/FA	Open cable end (standard) M12 connector; 8 pins (on request)















## Sensors

	Rotary encoder	Magnetic sensor
	WIG110	LHR5/1
<b>Incremental</b>		
<b>Power supply</b>	5 VDC or 24 VDC	5 VDC or 24 VDC
<b>Resolution</b> (standard) ppr	1/ 50/ 100/ 250/ 200/ 500/ 1000/ 5000	5000
<b>Output signal</b>	PP = Push Pull; LD = Line Driver	
<b>IP-rating</b>	IP65	IP67

# Datasheet

## Measuring display

Measuring display directly attached or externally in an installation or mounting housing

Mechanical characteristics	Direct display	Remote display	
	Mounting housing	Inst. housing	
<b>Battery-powered</b>			
<b>C10</b> <ul style="list-style-type: none"> <li>Display range: 99,999</li> <li>Digit height: 8.0 mm</li> <li>Measuring system: integrated</li> <li>Resolution: 5.000 ppr</li> <li>Power supply: 1.5 VDC</li> </ul>			
<b>F8P</b> <ul style="list-style-type: none"> <li>Display range: 999,999</li> <li>Digit height: 10.0 mm</li> <li>Measuring system: integrated</li> <li>Resolution: 5.000 ppr</li> <li>Power supply: 3.6 VDC</li> </ul>			
<b>WVZ11</b> <ul style="list-style-type: none"> <li>Display range: two lines each 99.9999</li> <li>Digit height: 8.0 mm</li> <li>Measuring system: LHR5</li> <li>Resolution: 5,000 ppr</li> <li>Power supply: 3.6 VDC or 10 to 30 VDC</li> </ul>	Figure On request	Figure On request	
<b>External power supply</b>			
<b>EP1-S</b> <ul style="list-style-type: none"> <li>Display range: 99.999999</li> <li>Digit height: 8.0 mm</li> <li>Measuring system: LHR5</li> <li>Resolution: 5.000 ppr</li> <li>Power supply: 24 VDC or 230 VAC</li> </ul>			
<b>EP2-I</b> <ul style="list-style-type: none"> <li>Display range: 99.9999</li> <li>Digit height: 14.0 mm</li> <li>Measuring system: LHR5</li> <li>Resolution: 5.000 ppr</li> <li>Power supply: 24 VDC or 230 VAC</li> </ul>			
<b>VZE</b> <ul style="list-style-type: none"> <li>Display range: two lines each 99.9999</li> <li>Digit height: 8.0 mm</li> <li>Measuring system: LHR5</li> <li>Resolution: 5,000 ppr</li> <li>Power supply: 24 VDC or 230 VAC</li> </ul>	Figure On request	Figure On request	



# Datasheet

**Ordering example** Meter counter with measuring wheel rotated by 90 degrees and measuring display

**MZ/E** - **L90** - **B** - **F8P/DA** - **P** - **X** - **200/G**

**Type**

**L90** = Light; measuring wheel rotated by 90 degrees

**Power Supply**

**B** = battery-powered  
**24** = 24 VDC/ external power supply  
**230** = 230 VAC/ external power supply

**Display /Installation Position**

**C10** = battery-powered  
**F8P** = battery-powered  
**EP7** = battery-powered  
**EP1** = EP1-S; external power supply  
**EP2** = EP2-I; external power supply  
**VZE** = external power supply  
**VZ24** = external power supply

**Display /Installation Position**

**/DA** = direct display; mounting housing  
**/FA** = remote display; mounting housing  
**/FE** = remote display; installation housing

**Resolution [ppr]**

**P** = programmable (standard 0.01m)  
**X** = custom programming on request

**Cable Length [m]**

**X** = direct display; mounting housing  
**1.0; 2.0; 5.0; 10** = remote display  
(observe German decimal separator “,”)

**Measuring Wheel Circumference [mm] /Tread**

**500; 304,8; 200**  
(observe German decimal separator “,”)

**Measuring Wheel Circumference [mm] /Tread**

**/G** = smooth  
**/RI** = corrugated  
**/N** = studded  
**/R** = crisscross knurled  
**/GG** = rubber, smooth  
**/GR** = rubber, knurled



Variants that cannot be configured from the ordering example are available on request as a special version.



# Datasheet

**Ordering example** Meter counter with measuring wheel rotated by 90 degrees without measuring display

**MZ/E** - **L90** - **24** - **LHR5/Y** - **250** - **5,0** - **500/N**

**Type**

**L90** = Light; measuring wheel rotated by 90 degrees

**Power Supply**

**5** = 5 VDC

**24** = 24 VDC

**Measuring System /Output Signal**

**LHR5** = LHR5/1 sensor

**WIG110** = rotary encoder

**Measuring System /Output Signal**

**/Y** = Push Pull

**/L** = Line Driver

**Resolution [ppr]**

1; 50; 100; 200; **250**; 500; 1000; 5000

further resolutions on request

**Cable Length [m]**

1,0; 2,0; **5,0**; 10

(observe German decimal separator ",")

**Measuring Wheel Circumference [mm] /Tread**

**500**; 304,8; 200

(observe German decimal separator ",")

**Measuring Wheel Circumference [mm] /Tread**

**/G** = smooth

**/RI** = corrugated

**/N** = studded

**/R** = crisscross knurled

**/GG** = rubber, smooth

**/GR** = rubber, knurled



Variants that cannot be configured from the ordering example are available on request as a special version.

The manufacturer reserves the right to make changes to the products that it deems necessary for their improvement without prior notice.