

# Datasheet



## Electronic meter counter with preselection function

### Features at a glance

- Electronic length measuring system including electronic measuring display (meter counter).
- Measurement of linear movements directly on the surface of running materials.
- Measurement is performed by a measuring wheel with a circumference of 200 mm,  $\varnothing$  63,66 mm).
- Incremental rotary encoder for rotary distance measurement (length measurement).
- Double line LED display with 6-digits process value and 6-digits set value
- Sensor and electronics protected by a robust housing made of powder-coated aluminium.
- Power supply optionally 230/115 VAC with connecting cable or 24 VDC.
- Optional spring mounting bracket for permanent pressure of the measuring wheel on the surface, guarantees slip-free measurement.
- Acoustic signal transmitter and LED permanent light switchable via relay output (optional).



Depending on the application, we offer you the electronic meter counter in a wide variety of designs with customer-specific options, such as length measurement with remotely installed measuring displays and other encoder systems.

### Standard variants Example

Electronic meter counter with programmable preset counter, measuring wheel with 200 mm circumference.

#### **MZ/E-run10-230-VZE/DA-200/GR-BL**

- Meter counter with preselection function
- Power supply (230 VAC)
- Preset counter type VZE-48Q, programmable, direct display in mounting housing
- Incremental rotary encoder
- Measuring wheel with 200 mm circumference, tread rubber, knurled, corpus aluminium
- Housing aluminium, powder-coated, blue (RAL 5010)

### Adjustable functions

- Automatic or manual reset
- Counting with phase shifting property
- Password assignment
- Reset and input protection
- Multiplication coefficient
- Release delay
- Data storage
- Decimal point position



# Datasheet

## Mechanical characteristics

Dimensions	approx. 166 x 84 x 171 mm (L x B x H)
Weight	761 g
Housing	Aluminium, powder-coated (blue RAL 5010 or light grey RAL 7035)
Electrical connection	230/115 VAC: 3-wire cable - pre-wired, not detachable (open cable end); cable length: 0.5, 1, 3, 5 or 10 meters 24 VDC: 2-wire cable Relay output: 3-wire cable - pre-wired, non-detachable (open cable end); 1=NO, 2=C, 3=NC Connection to housing using PG cable gland M16 x 1.5 mm
Operating temperature	0°C to +50°C
Humidity	98% RH (no condensing)
Relative humidity	0 to 90% (no condensing)
IP-rating	IP40
Mounting	Base plate (standard), spring mounting bracket FI (optional)

### Preset counter

Type	VZE-48Q
Display	Double line LED display, 6-digits, digits height 8 mm Upper row: Process value (red) Lower row: Set value (green)
Display and preset range	-999.999 bis +999.999
Keyboard	Front panel operation - 4 Program- and function buttons

### Sensor

Incremental rotary encoder	SCA24-128 or SCA24-1000 (optional)
Shaft load: axial	max. 20 N
radial	max. 20 N
Max. speed	12.000 min <sup>-1</sup>
Starting torque	< 0,005 Nm at 25°C
Moment of inertia	1,0 gcm <sup>2</sup>

### Measuring wheel

Type	MR-200
Circumference	200 mm
Diameter	63,66 mm
Width	12 mm
Corpus	Aluminium
Tread	smooth (G), corrugated (RI), studded (N), crisscross knurled (R), rubber smooth (GG) or rubber, knurled (GR)
Mounting (drilling diameter)	∅7 mm
Weight	approx. 60 g

# Datasheet

## Electrical characteristics

Power supply	230 VAC ( $\pm 15\%$ ) 50/60 Hz - 2,3 VA 115 VAC ( $\pm 15\%$ ) 50/60 Hz - 2,3 VA 24 VDC
Electromagnetic compatibility (EMC)	2014/30/UE
RoHS	2011/65/UE

Preset counter	
Type	VZE-48Q
Adjustable functions	Automatic or manual reset, counting with phase shifting property, password assignment, reset and input protection, multiplication coefficient, release delay, data storage and decimal point position
Relay output	5 A at 250 VAC (resistive load)

Sensor	
Type: Incremental rotary encoder	SCA24-128 or SCA24-1000 (optional)
Pulse count (resolution, with 4x edge evaluation)	128 (ppr) number of pulses per revolution (resolution 0.39)  1000 (ppr) number of pulses per revolution (resolution: 0.05)
Pulse frequency	200 kHz max.

## Adjustable functions and programming parameters

- Operation display
- Password display
- Input function
- Debounce time for Ch-A and Ch-B
- Debounce time for reset and pause input
- Counting direction
- Sensor type
- Output function
- Output operating state
- Release delay
- Decimal point position
- Data storage
- Reset and input protection
- Multiplication factor
- Reset value
- Password for parameter input

## Electrical connection

Connection	Cable type	Wire cross section	Number of wires
230/115 VAC	ÖLFLEX® Classic control cable	0,75 mm <sup>2</sup>	3
24 VDC		0,50 mm <sup>2</sup>	2
Relay output		0,50 mm <sup>2</sup>	3

**Cable length** Power supply (230/115 VAC or 24 VDC)

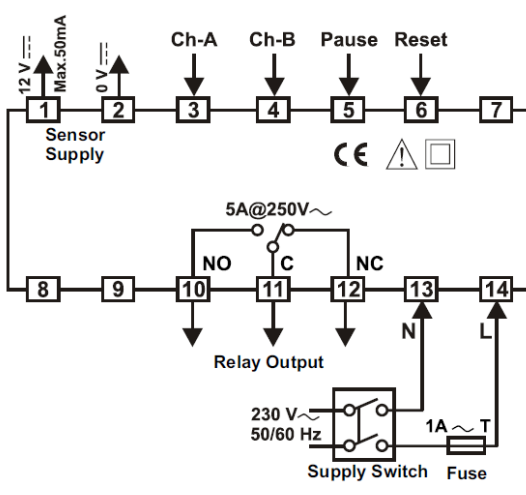
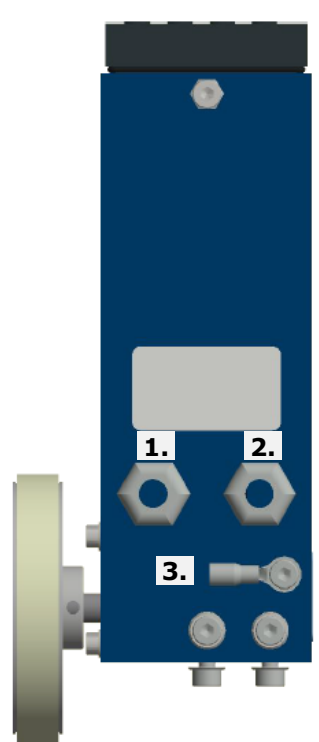
0,5, 1, 3, 5 or 10 meters (other cable lengths on request).

# Datasheet

## Pin assignment Meter counter

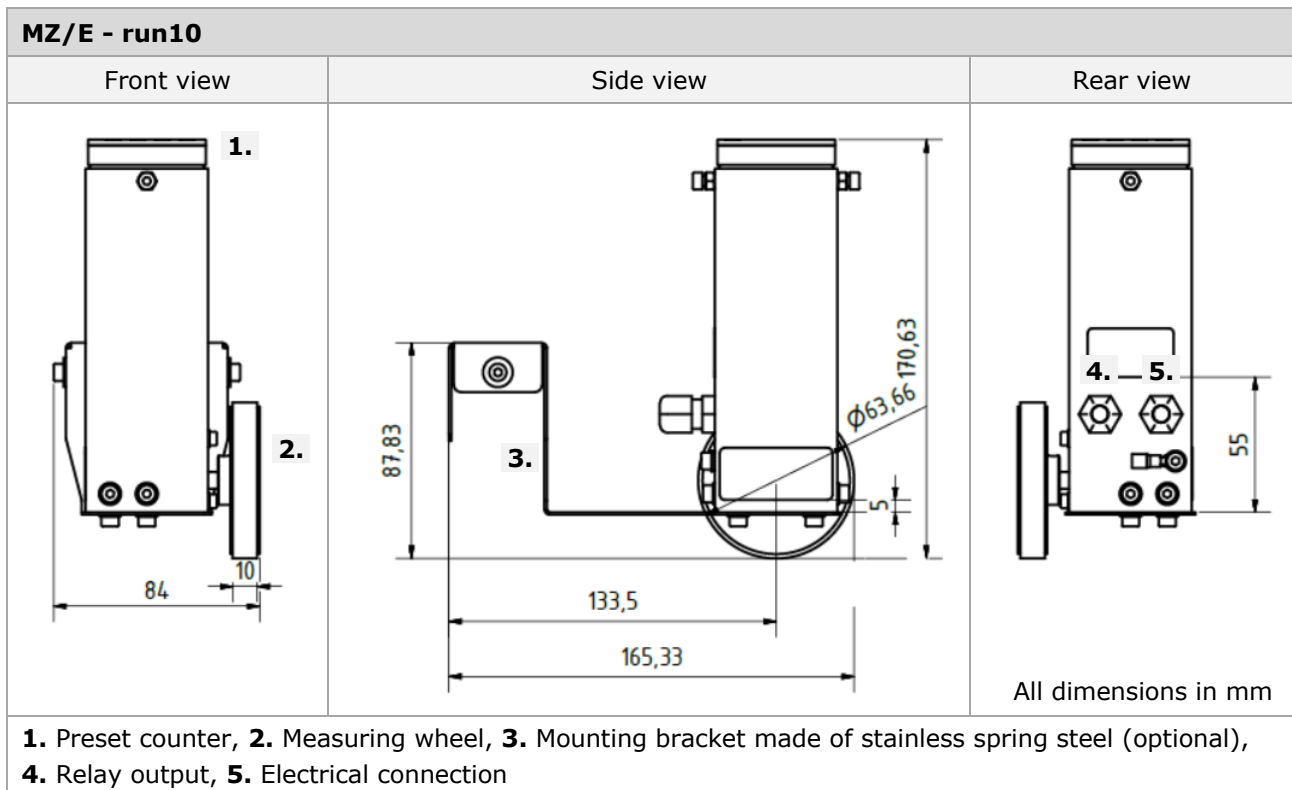
PIN	Function	Remarks
1	Encoder supply +12 VDC	Sensor output rotary encoder, max. 50 mA
2	Encoder supply 0V	Sensor output rotary encoder
3	Ch-A	Counter input
4	Ch-B	
5	Pause	Pause input
6	Reset	Reset input
7	not connected	
8	not connected	
9	not connected	
10	NO	Relay output 5 A at 250 VAC
11	C	
12	NC	
13	Device power Supply N	230 VAC ( $\pm 15\%$ ) 50/60 Hz - 2,3 VA
14	Device power Supply L	115 VAC ( $\pm 15\%$ ) 50/60 Hz - 2,3 VA 24 VDC

### MZ/E - run10

Electrical wiring diagram	Electrical connection
	
<p><b>1.</b> Relay output, <b>2.</b> Electrical connection, <b>3.</b> Ground connection</p>	

# Datasheet

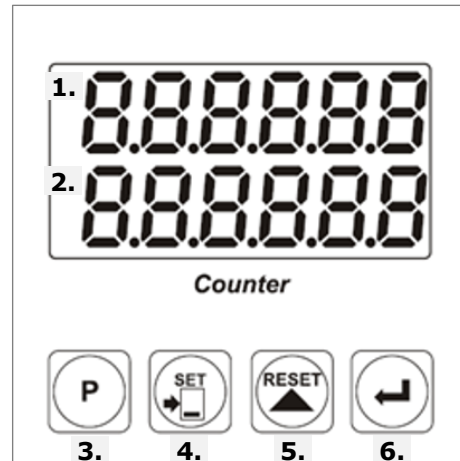
## Dimensions Meter counter



# Datasheet

**Preset counter** Front panel: display and function buttons

VZE-48Q



1. Actual process value (red)
2. Set and parameter value (green)
3. PROG button is used for accessing to the program parameters
4. SHIFTING button is used for changing the cursor position in the programming mode and entering the SET value
5. RESET and INCREMENT button is used to reset the actual value or increment the digit value that is selected by SHIFTING button
6. ENTER button is used for saving all changes to memory and accessing to the parameters



### Notice

For the exact operation of the preset counter, for example, changing and saving the preset value, adjusting programme parameters, see the operating instructions for the VZE-48Q preset counter.

# Datasheet

## Measuring wheel

Individual adaptation possibilities due to the different properties of the tread offer various application possibilities.

### Measuring wheel profile Application on running materials

Tread	smooth [G]	corrugated [RI]	studded [N]	crisscross knurled [R]	rubber smooth [GG]	rubber, knurled [GR]
Cardboard / Paperboard	X	X	X	X	X	X
Wood material	X	X	X	X	X	X
Plastic (PE, PVC, etc.)	X	X	X	X	X	X
Textile	X	X	X		X	X
Paper	X	X	X		X	
Metal, greasy parts, steel	X				X	X
Leather	X					
Carpet, fleece			X		X	X
Hose, cable			X		X	X
Glass, plastic floor coverings		X			X	X
Painted surfaces	X	X			X	X
Rubber, foam, soft plastic				X	X	X

## Material

Tread - Material	Aluminium [AL]	Polyurethane [PUR]	Hytrel [TPE]
Permissible operating temperature	-30 °C ... +180 °C		-10 °C ... +70 °C

### Material hardness (Shore hardness), measuring wheel with a circumference of 200 mm

Tread - Profile	crisscross knurled [R]	smooth [G]	smooth [G]	studded [N]	corrugated [RI]
Tread material	AL	TPE	PUR	NBR	TPE
Tread hardness approx.	--	90 Shore A	--	55 ±5 Shore A	90 Shore A

# Datasheet

## Ordering example Electronic meter counter with preselection function

**MZ/E** - **run10** - **230** - **VZE/DA** - **200/G** - **BL** - **FI**

**Type**  
run10

### Spannungsversorgung

**230** = 230 VAC ( $\pm 15\%$ ) 50/60 Hz - 2,3 VA  
**115** = 115 VAC ( $\pm 15\%$ ) 50/60 Hz - 2,3 VA  
**24** = 24 VDC (via plug-in power supply unit)

### Display /Installation Position

**VZE** = Preset counter Type VZE-48Q

### Display /Installation Position

**/DA** = direct display; mounting housing

### Measuring Wheel Circumference /Width /Tread

**200** = 200 mm (standard); corpus aluminium  
**X** = no wheel

Measuring Wheel Circumference **/Width** /Tread  
= 12 mm (standard)

### Measuring Wheel Circumference [mm] /Width /Tread

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

### Housing

**BL** = Aluminium, powder-coated, blue (RAL 5010)  
**LG** = Aluminium, powder-coated, light grey (RAL 7035)

### Mounting

**O** = without base plate  
**FI** = Spring mounting bracket (optional)



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

Acoustic signal transmitter and LED permanent light (switchable via relay output) as well as different cable lengths for power supply (230/115 VAC or 24 VDC): 0.5, 1, 3, 5 or 10 metres are available as accessories on request.

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