



## α SE/SEB/SEB-Z



### Description

Incremental rotary encoders, monodirectional (SE) or bidirectional (SEB), with (SEB-Z) or without zero pulse. Accurate and reliable, their stout mechanical features make them fit to applications even in very harsh conditions.

### Mechanical and environmental specifications

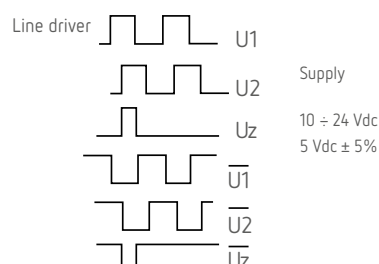
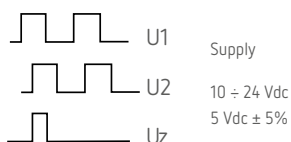
Dimensions	See the drawing
Weight	400 g
Materials: Case shaft	Aluminium + ABS self-extinguishing Stainless steel AISI 303
Shaft diameter	10 mm
Revolutions per minute	6000*continuous - 1000 temporary * Max operating speed with IP65 sealing ring applied on the shaft: 3000 RPM
Starting torque	$\leq 0,8$ Ncm
Inertia	$\leq 25$ g cm <sup>2</sup>
Max load	80N axial / 100N radial
Shock resistance (11 ms)	50 G
Protection degree	IP 64 (optional IP65)
Operating temperature	0 ÷ +60°C
Stocking temperature	-20 ÷ 80°C
Mounting fittings	Supporting arm of cast aluminium Measuring wheels development of 200 or 500mm

### Electrical and operating specifications

Pulse code	Incremental
Output Signals	SE Square wave SEB/SEB-Zs Two square waves 90°±15° out of phase. Zero pulse 90°±15° wide
Electronic output	Push-pull, open collector NPN, pull-up resistor
NPN, line driver	Signals protection against short circuits
Supply	10 ÷ 24 Vdc or 5 Vdc ±5%
Current consumption	30 ÷ 80 mA
Connection outlets	Axial cable 3 m long , (1 m for line driver output) Optional: axial connector type MS
Pulses-revolution	2 ÷ 5000
Zero reference pulse	SEB-Z 1 pulse each revolution
Max frequency	100 KHz

### Electronics

Open collector - pull-up resistor - push-pull



With connection diagram 3-4-5  
(type SEB/SEB-Z only): signal 2 lags signal 1 with  
anti-clockwise rotation (seen from the shaft side)

## Connections

### Open collector - pull-up resistor - push-pull - scheme 5

A	= Signal 2*
B	= 0 volt
C	= Signal Z (for types SEB-Z only)
D	= +Vdc
E	= signal 1
*for birectional types only	

### Cable outlet

Green	= Signal 2*
White	= Signal 1
Blue	= 0 Volt
Braid	= Shield
Red	= +Vdc
Brown	= signal Z (for types SEB-Z only)
*for birectional types only	

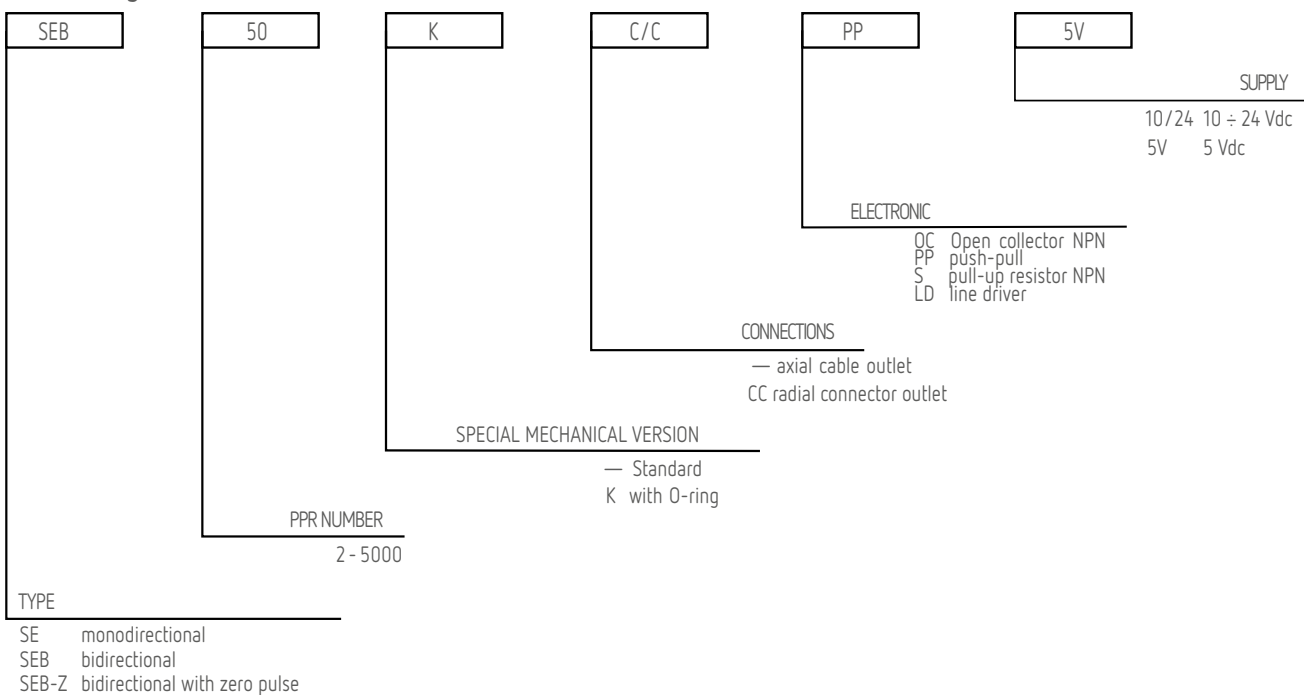
### Line driver - scheme 3 (w/o zero pulse)

A	= Signal 1
B	= Signal 2
C	= Signal 1
D	= +Vdc
E	= Signal 2
F	= 0V
G	= Non connected

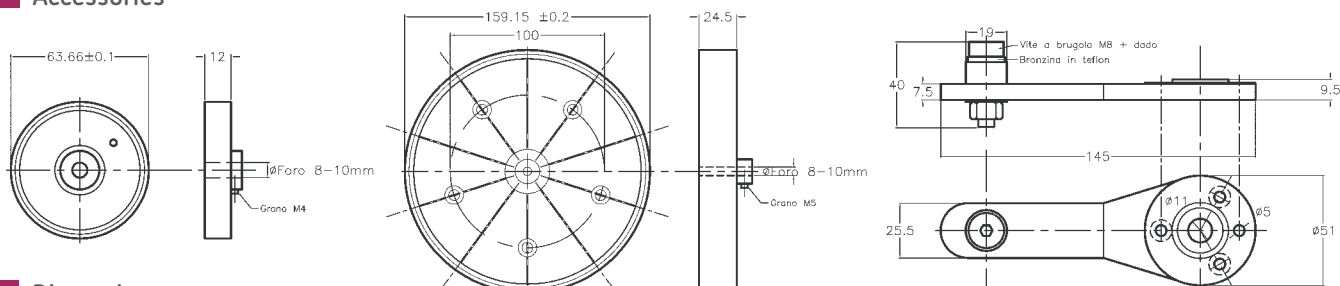
### Line driver - scheme 4

A	= Signal 1
B	= Signal 2
C	= Signal Z
D	= +Vdc
E	= +Vdc
F	= 0V
G	= Signal 1
H	= Signal 2
I	= Signal Z
J	= Non connected

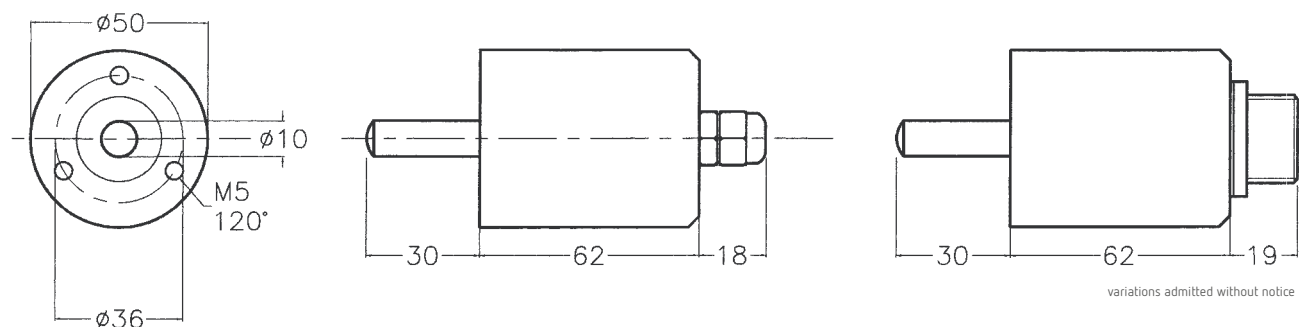
## Ordering information



## Accessories



## Dimensions



The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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