

### Main characteristics

Electronic hand wheels series studied for positioning on the numerical control machines with manual drive.

- Resolution up to 10.000 ppr with zero
- Several electronic output configurations available.  
Up to 28 Vdc power supply.
- Output frequency up to 100 kHz
- Output cable with connector and several flanges available



### Ordering code

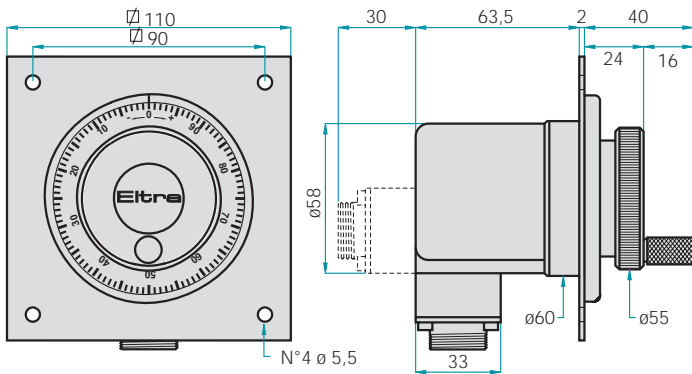
EV	A	M	100	Z	5	L	10	M	R	.	XXX
Electronic hand wheel											Special version code numbered from 001 to 999
<b>Type of flanges</b>											
mod. EV A <b>A</b>											
mod. EV B <b>B</b>											
mod. EV C <b>C</b>											
with grip handle <b>M</b>											
without grip handle <b>S</b>											
<b>Resolutions</b>											
PPR: for EV A/B from 1 to 10000											
PPR: for EV C 100											
<i>Please, directly contact our offices for pulses availability</i>											
<b>Zero pulse</b>											
without zero pulse <b>S</b>											
with zero pulse <b>Z</b>											
<b>Input voltage</b>											
(EVC available only with 5 Vdc) 5											
5 ÷ 28											
<i>LINE DRIVER available only with 5 Vdc or 8 ÷ 24 Vdc</i>											
<b>Shaft diameter</b>											
6 ø 6 g6 mm ( EVC)											
10 ø 10 g6 mm (EVA/B)											
<b>Output types</b>											
<b>N</b> NPN											
<b>C</b> NPN OPEN COLLECTOR											
<b>P</b> PUSH PULL											
<b>L</b> LINE DRIVER											
<i>For optionals about output types please refer to incremental outputs section</i>											

Full stop to separate special versions

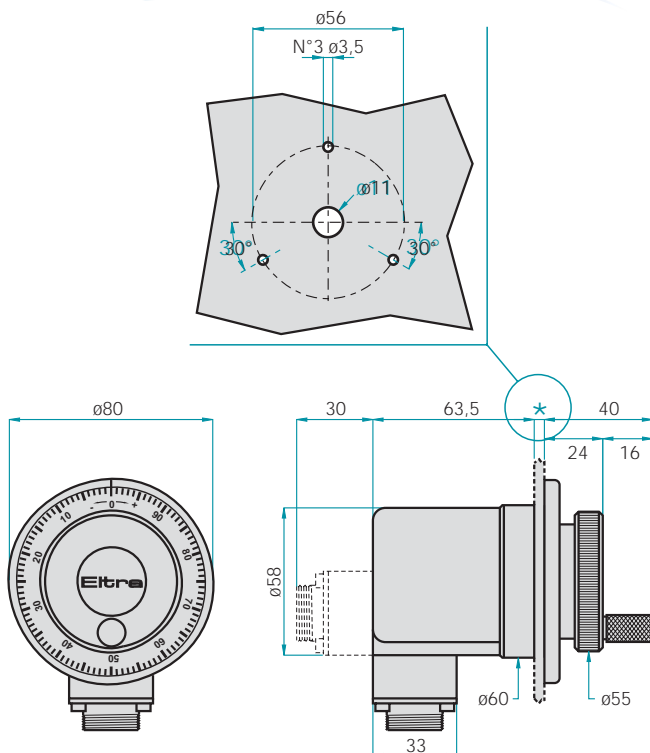
**A** axial (only EVA/B)  
**R** radial

**P** cable output (standard length 1,5 m for EVA/B)  
cable output (standard length 0,3 m for EVC)  
**M** connector M53106E 165-15 or 18-15 for EVA/B  
**J** connector JMSP 1607 F or 1610 F for EVA/B

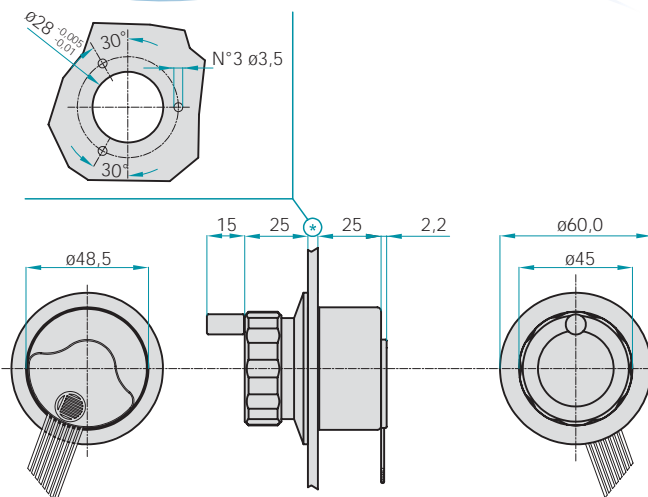
## EVA



## EV B



## EVC



## Electrical specifications

<b>Resolution</b>	from 1 to 10000 PPR for EVA/B 100 PPR for EVC
<b>Input voltage</b>	5 Vdc for EVC 5 Vdc / 5 ÷ 28 for EVA/B LINE DRIVER inly available with input voltage 5/8÷24 Vdc
<b>Input current with no output load</b>	Max 100 mA
<b>Source and sink current</b>	50 mA for channel 20 mA for channel with LINE DRIVER
<b>Output types</b>	NPN / NPN-OPEN COLLECTOR / PUSH PULL / LINE DRIVER
<b>MAX output frequency</b>	100 kHz Max
<b>Frequency response</b>	$F = \frac{RPM \times Resolution}{60}$

## Mechanical specifications

<b>Shaft diameter</b>	ø6 mm g6 for EVC ø10 mm g6 for EVA/B
<b>Enclosure rating</b>	IP64 standard for EVA/B IP40 standard for EVC
<b>Mechanical lines per turn</b>	100
<b>Shock</b>	50 G for 11 msec
<b>Vibrations</b>	10G 10 ÷ 2000 Hz
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Bearings</b>	n° 2 ball bearings
<b>Shaft material</b>	Stainless steel AISI303
<b>Body material</b>	Aluminium D11S - UNI 9002/5
<b>Housing material</b>	PA 66 reinforced with fiber glass for EVA/B Fe for EVC
<b>Operating temperature</b>	0° ÷ +60°C
<b>Storage temperature</b>	-25° ÷ +70°C
<b>Weight</b>	150g for EVC 450g for EVA/B

Example of an EVC application

