

### MAIN FEATURES

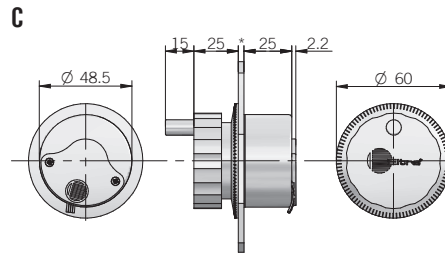
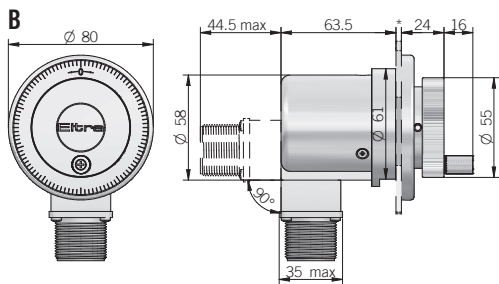
Electronic handwheel series designed for positioning on CNC machines with manual drive.

- 3 channel encoder (A / B / Z) up to 2500 ppr
- Power supply up to +28 V DC with several electrical interfaces available
- Up to 220 kHz output frequency
- Cable or connector output
- Solid shaft diameter up to 10 mm
- Mounting by fixing flange

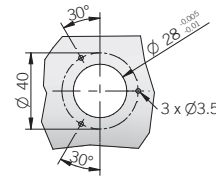
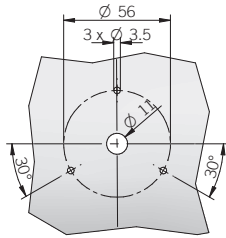


### ORDERING CODE

EV	B	*S	100	S	5	L	10	P	R	.XXX
<b>SERIES</b> electronic handwheel EV I										
<b>MODEL</b> fixing flange screw holes $\varnothing$ 56 mm B fixing flange screw holes $\varnothing$ 40 mm C										
<b>KNOB</b> * add to ordering code if without knob S										
<b>RESOLUTION</b> (mod. B) see table ppr 100 to 2500 (mod. C) ppr 100 see table for pulses availability										
<b>ZERO PULSE</b> without zero pulse S (mod. B) with zero pulse Z										
<b>POWER SUPPLY</b> (with L electrical interface) 5 V DC 5 5 ... 28 V DC 5/28										
<b>ELECTRICAL INTERFACE</b> NPN open collector C push-pull P line driver L (mod. B) power supply 5/28V - output RS-422 RS										
<b>SHAFT DIAMETER</b> (mod. C) mm 6 (mod. B) mm 10										
<b>OUTPUT TYPE</b> cable (standard length: mod. B = 1,5 m - mod. C = 0,3 m) P preferred cable lengths 2 / 3 / 5 / 10 m, to be added after DIRECTION TYPE (eg. PR5) (mod. B) MIL connector M (mod. B) JIS-C-5432 connector J female connector included, without female please add 162 as variant code										
<b>DIRECTION TYPE</b> (mod. B) axial A radial R										
<b>VARIANT</b> custom version XXX										



**Mounting holes requirement**



dimensions in mm

**ELECTRICAL SPECIFICATIONS**

<b>Resolution</b>	from 100 to 2500 ppr (mod. B) 100 ppr (mod. C)
<b>Power supply</b>	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
<b>Current consumption without load</b>	100 mA max
<b>Max load current</b>	C / P = 50 mA / channel L / RS = 20 mA / channel
<b>Output type *</b>	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)
<b>Max output frequency</b>	200 kHz mod. B 150 kHz mod. C
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Electromagnetic compatibility</b>	according to 2014/30/EU directive
<b>RoHS</b>	according to 2011/65/EU directive
<b>UL / CSA certificate</b>	E212495

\* for further details please see OUTPUT LEVELS under TECHNICAL BASICS section

**MECHANICAL SPECIFICATIONS**

<b>Shaft diameter</b>	ø 6 / 10 mm
<b>Enclosure rating</b>	IP 64 (mod. B) (IEC 60529) IP 40 (mod. C) (IEC 60529)
<b>Mechanical indexes per turn</b>	100
<b>Shock</b>	50 G, 11 ms (IEC 60068-2-27)
<b>Vibration</b>	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
<b>Bearing stage material</b>	EN-AW 2011 aluminum
<b>Shaft material</b>	1.4305 / AISI 303 stainless steel
<b>Housing material</b>	PA 66 glass fiber reinforced (mod. B) nickel plated brass (mod. C)
<b>Bearings</b>	2 ball bearings
<b>Bearings life</b>	10 <sup>9</sup> revolutions
<b>Operating temperature</b>	-10° ... +60°C (+14° ... +140°F)
<b>Storage temperature</b>	-25° ... +70°C (-13° ... +158°F)
<b>Weight</b>	450 g (15,87 oz) mod. B 150 g (5,29 oz) mod. C

**EVB SERIES RESOLUTIONS**

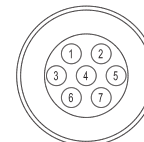
100 - 200 - 360 - 500 - 512 - 720 - 1000 - **1024** - 1440 - 2000 - 2048 - 2500

please directly contact our offices for other pulses, preferred resolutions in bold

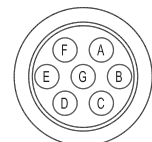
**CONNECTIONS**

Function	Cable C / P	Cable L / RS	7 pin J C / P	7 pin J L / RS no Zero	7 pin M C / P	7 pin M L / RS no Zero	10 pin J L / RS with Zero	10 pin M L / RS with Zero
+V DC	red	red	6	4	F	D	4 - 5	D - E
0 V	black	black	1	6	A	F	6	F
Ch. A	green	green	3	1	C	A	1	A
Ch. A-	/	brown	/	3	/	C	7	G
Ch. B	yellow	yellow	5	2	E	B	2	B
Ch. B-	/	orange	/	5	/	E	8	H
Ch. Z	blue	blue	4	/	D	/	3	C
Ch. Z-	/	white	/	/	/	/	9	I
⏏	shield	shield	7	7	G	G	10	J

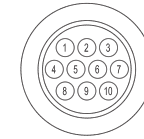
J connector (7 pin)  
JIS-C-5432 Size 16  
solder side view FV



M connector (7 pin)  
Amphenol MS3102-E-16-S  
solder side view FV



J connector (10 pin)  
JIS-C-5432 Size 16  
solder side view FV



M connector (10 pin)  
Amphenol MS3102-E-18-1  
solder side view FV

