

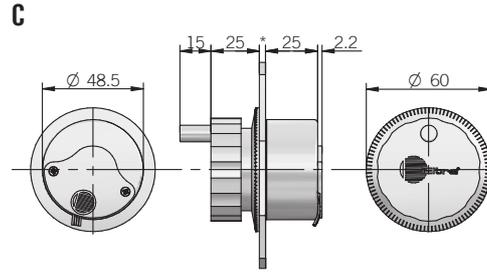
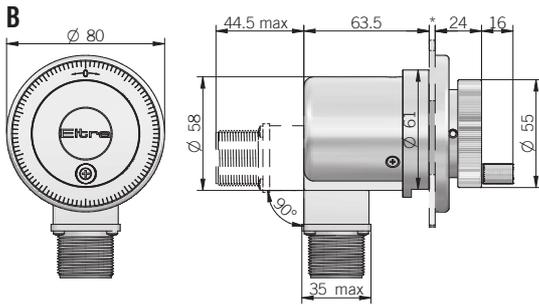
MAIN FEATURES

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

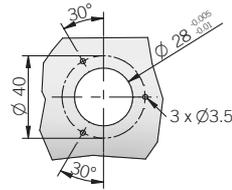
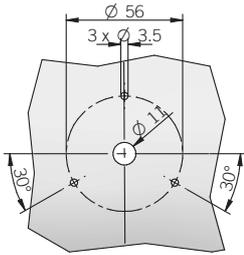
- 3 channel encoder (A / B / Z) up to 2500 ppr
- Power supply up to +30 V DC with several electrical interfaces available
- Up to 220 kHz output frequency
- Cable or connector output
- Solid shaft diameter up to 10 mm
- Mounting by fixing flange



ORDERING CODE	EV	B	*S	100	S	5	L	10	P	R	.XXX
SERIES electronic handwheel EV											
MODEL fixing flange screw holes ϕ 56 mm B fixing flange screw holes ϕ 40 mm C											
KNOB * add to ordering code if without knob S											
RESOLUTION (mod. B) see table ppr 100 to 2500 (mod. C) ppr 100 refer to the available pulses list											
ZERO PULSE without zero pulse S (mod. B) with zero pulse Z											
POWER SUPPLY (with L electrical interface) 5 V DC 5 5 ... 28 V DC 5/28											
ELECTRICAL INTERFACE NPN open collector C push-pull P line driver L (mod. B) power supply 5/28V - output RS-422 RS											
SHAFT DIAMETER (mod. C) mm 6 (mod. B) mm 10											
OUTPUT TYPE 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											
DIRECTION TYPE (mod. B) axial A radial R											
VARIANT custom version XXX											



RECOMMENDED INTERFACE FLANGE DESIGN



dimensions in mm

ELECTRICAL SPECIFICATIONS	
Resolution	from 100 to 2500 ppr (mod. B) 100 ppr (mod. C)
Power supply¹	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
Current consumption without load	100 mA max
Max load current	C / P = 50 mA / channel L / RS = 20 mA / channel
Electrical interface²	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)
Max output frequency	200 kHz mod. B 150 kHz mod. C
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2015/863/EU directive
UL / CSA	certificate n. E212495

MECHANICAL SPECIFICATIONS	
Shaft diameter	Ø 6 / 10 mm
Enclosure rating IEC 60529	IP 64 (mod. B) IP 40 (mod. C)
Mechanical indexes per turn	100
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA 66 glass fiber reinforced (mod. B) nickel plated brass (mod. C)
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature^{3,4}	-10° ... +60°C (+14° ... +140°F)
Storage temperature⁴	-25° ... +70°C (-13° ... +158°F)
Weight	450 g (15,87 oz) mod. B 150 g (5,29 oz) mod. C

EVB SERIES RESOLUTIONS

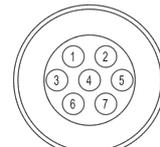
100 - 200 - 360 - 500 - 512 - 720 - **1000** - **1024** - 1440 - 2000 - 2048 - 2500

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

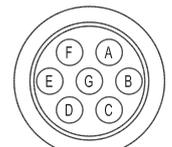
CONNECTIONS

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
A+	green	green	3	1	C	A	1	A
A-	/	brown or grey	/	3	/	C	7	G
B+	yellow	yellow	5	2	E	B	2	B
B-	/	orange	/	5	/	E	8	H
Z+	blue	blue	4	/	D	/	3	C
Z-	/	white	/	/	/	/	9	I
⊖	shield	shield	7	7	G	G	10	J

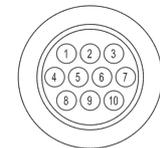
J connector (7 pin)
JIS-C-5432 Size 16
solder side view FV



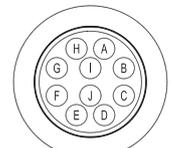
M connector (7 pin)
Amphenol MS3102-E-16-S
solder side view FV



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



¹ as measured at the transducer without cable influences

² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section

³ measured on the transducer flange

⁴ condensation not allowed