EV B
ELECTRONIC HANDWHEEL

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
- Mounting by fixing flange

ORDERING CODE

EV | B | *S | 100 | S | 5 | L | 10 | M | R | .162 | +XXX

SERIES
electronic handwheel EV

MODEL
fixing flange screw holes ø 56 mm B

KNOB
* add to ordering code if without knob S

RESOLUTION
see table ppr 100 to 2500
refer to the available pulses list

ZERO PULSE
without zero pulse S
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
power supply 5/28V - output RS-422 RS

SHAFT DIAMETER
mm 10

OUTPUT TYPE
cable (standard length 1,5 m) P
preferred cable lengths 2 / 3 / 5 / 10 m, to be added after DIRECTION TYPE (eg. PR5)
MIL male connector M
JIS-C-5432 male connector J

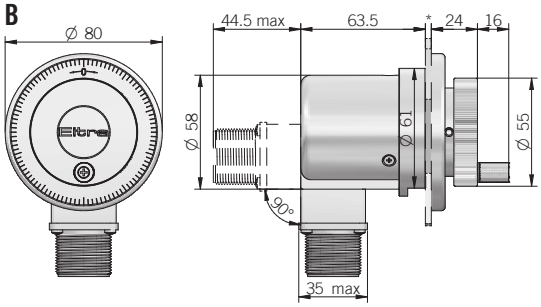
DIRECTION TYPE
axial A
radial R

MATING CONNECTOR
mating connector not included .162
to be reported only with connector output (eg. MR.162), for mating connector see Accessories

VARIANT
custom version XXX

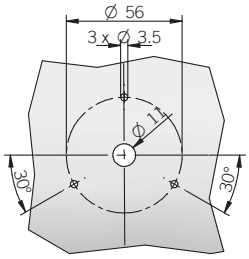
eltra@eltra.it

B



dimensions in mm

RECOMMENDED INTERFACE FLANGE DESIGN



ELECTRICAL SPECIFICATIONS

Resolution	from 100 to 2500 ppr
Power supply[1]	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 interface[2]	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 similar)
Max output frequency	220 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	certificate n. E212495

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

MECHANICAL SPECIFICATIONS

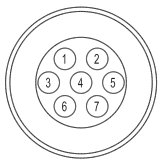
Shaft diameter	ø 10 mm
Enclosure rating	IP 64 (IEC 60529)
Mechanical indexes per turn	100
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	PA 66 glass fiber reinforced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

[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

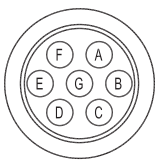
CONNECTIONS

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

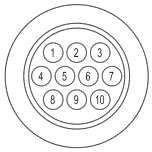
J connector (7 pin)
JIS-C-5432 Size 16
solder side view FV



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