

Absolute Rotary Encoders

Absolute Singleturn Magnetic Encoder

Singleturn absolute encoder series, developed with contact-less magnetic technology.

It's a very compact and adaptable product with sturdy construction (due to separated chambers), easy to set up (code reset) with different mechanical mountings.

The singleturn absolute encoder allows a precise encoding of the angular position of the shaft, to which the encoder is coupled to, even if the power goes off.

Therefore, each single degree position is converted into a specific code (Gray or binary) proportionally to the number of bits.

Rotary magnetic encoders are based on magnetic poles with the help of which an angle of rotation of the shaft is fixed.



The main series of Eltra Magnetic Singleturn Absolute encoder

- EA 36 F/G
- EA 36 A
- EMA 22A - SSI
- EMA 50 A/B/BY
- EMA 50 F/G
- EMA 55 A/AY
- EML 50 A/B/BY
- EML 50 F/G



Eltra Sensing Technology offers shafted encoders, with blind hollow shaft and kit encoders under this line of rotary encoders.

Key features:

- Resolution: 2 - 8192 ppr (13 bit).
- Power supply: 5 V DC , 12 - 28 V DC, 10 - 30 V DC
- Rotation speed: 3000, 8000 or 10000 rpm.
- External diameter: 22 - 55 mm
- Shaft/bore diameter: 6 - 15 mm
- Supported output interfaces: Bit parallel, Analogue or SSI.
- Temperature range: -40 .. +100 °C
- Enclosure protection: IP67
- Cable or connector output with radial or axial shaft load.



Types of mounting:

- synchronous flange;
- clamping flange;
- stator coupling;
- fixing holes;
- anti-rotation pin

Magnetic encoder with special features:

Miniaturized encoder for limited size applications (EA 36 F-G-A)

Encoders with separated chambers and sturdy construction (EA 36 F-G-A, EMA 22A, EMA 50A-B-BY, EML 50 A-B-BY, EML 50 F -G)

Kit encoders (EMA 22 A, EMA 55 A-AY)

Magnetic Singleturn Absolute Encoders

Series	Shaft type	electronic interface			key features				
		BIT PARA LLEL	S S I	Analogue	External diameter, mm (max)	Shaft/bore diameter, mm (max)	Resolution (min) ppr	Resolution (max)ppr	Resolution (max)bit (singleturn)
EA 36F	blind hollow shaft		+		36	6	360	720	12
EA 36G	blind hollow shaft		+		36	6	360	720	12
EA 36A	solid shaft		+		36	6	360	720	12
EMA 22A	kit encoder		+		22	10	8	8192	13
EMA 50A	solid shaft	+	+		50	10	2	8192	13
EMA 50B	solid shaft	+	+		50	10	2	8192	13
EMA 50BY	solid shaft	+	+		50	10	2	8192	13
EMA 50F	blind hollow shaft	+	+		50	15	2	8192	13
EMA 50G	blind hollow shaft	+	+		50	15	2	8192	13
EMA 55A	kit encoder		+		55	10	8	8192	13
EMA 55AY	kit encoder		+		55	10	8	8192	13
EML 50A	solid shaft			+	50	10			12
EML 50B	solid shaft			+	50	10			12
EML 50BY	solid shaft			+	50	10			12
EML 50F	blind hollow shaft			+	50	15			12
EML 50G	blind hollow shaft			+	50	15			12

Series	key features			special features	Separated chambers	Mounting Type	Output type	
	Rotation speed (max) rpm	Operating temperature (°C)	Enclosure rating (max)	miniturized			cable output type	connector output type
EA 36F	8000	-20..+100	IP67	+	+	stator coupling	+	
EA 36G	8000	-20..+100	IP67	+	+	anti-rotation pin	+	
EA 36A	8000	-20..+85	IP67	+	+	fixing flange	+	
EMA 22A	10000	-40..+125	IP67		+	clamping flange	+	
EMA 50A	3000	-25..+85	IP67		+	synchronous flange	+	+
EMA 50B	3000	-25..+85	IP67		+	synchronous flange	+	+
EMA 50BY	3000	-25..+85	IP67		+	synchronous flange	+	+
EMA 50F	3000	-25..+85	IP67		+	stator coupling	+	+
EMA 50G	3000	-25..+85	IP67		+	anti-rotation pin	+	+
EMA 55A	10000	-40..+100	IP67			fixing holes	+	+
EMA 55AY	10000	-40..+100	IP67			fixing holes	+	+
EML 50A	3000	-25..+85	IP67		+	synchronous flange	+	+
EML 50B	3000	-25..+85	IP67		+	synchronous flange	+	+
EML 50BY	3000	-25..+85	IP67		+	synchronous flange	+	+
EML 50F	3000	-25..+85	IP67		+	stator coupling	+	+
EML 50G	3000	-25..+85	IP67		+	anti-rotation pin	+	+

Series	Power supply			Type of shaft load	
	5 V DC	12...28 V DC	8...30 V DC	Axial shaft loads	Radial shaft loads
EA 36F	+		+		+
EA 36G	+		+		+
EA 36A	+		+		+
EMA 22A	+			+	+
EMA 50A	+		+	+	+
EMA 50B	+		+	+	+
EMA 50BY	+		+	+	+
EMA 50F	+		+	+	+
EMA 50G	+		+	+	+
EMA 55A	+		+	+	+
EMA 55AY	+		+	+	+
EML 50A		+		+	+
EML 50B		+		+	+
EML 50BY		+		+	+
EML 50F		+		+	+
EML 50G		+		+	+

Eltra Absolute Singleturn Magnetic Encoders

Ordering code	Series
EA36A12B5SPX6X8PR	EA 36 A
EA36A12B8/30SPX6X8PR	EA 36 A
EA36A12G5SPX6X8PR	EA 36 A
EA36A12G8/30SPX6X8PR	EA 36 A
EA36F12B5SPX6X8PR	EA 36 F / G
EA36F12B8/30SPX6X8PR	EA 36 F / G
EA36F12G5SPX6X8PR	EA 36 F / G
EA36F12G8/30SPX6X8PR	EA 36 F / G
EA36G12B5SPX6X8PR	EA 36 F / G
EA36G12B8/30SPX6X8PR	EA 36 F / G
EA36G12G5SPX6X8PR	EA 36 F / G
EA36G12G8/30SPX6X8PR	EA 36 F / G
EMA22A2048B5SPX10S10PR	EMA 22A - SSI
EMA22A2048B5SPX8S10PR	EMA 22A - SSI
EMA22A2048B5SPX8S10PR3	EMA 22A - SSI
EMA22A400B5SPX5S10PR.1084	EMA 22A - SSI
EMA22A4096B5SPX6S10PR	EMA 22A - SSI
EMA22A8192B5SPX10S10PR2	EMA 22A - SSI
EMA22A8192B5SPX6S10PR	EMA 22A - SSI
EMA22A8192B5SPX6S10PR.1060	EMA 22A - SSI
EMA22A8192B5SPX6S10PR2	EMA 22A - SSI
EMA22A8192B5SPX9S10PR	EMA 22A - SSI
EMA50A1024G8/30NNX6S3PR.209	EMA 50 A / B / BY
EMA50A128G8/30RPX6S3PR2	EMA 50 A / B / BY
EMA50A12B11/30PPS6S3PR.592	EMA 50 A / B / BY
EMA50A20B8/30PPS8S3PR	EMA 50 A / B / BY
EMA50A256G5NNX6S3PR	EMA 50 A / B / BY
EMA50A256G5NNX6X3PR	EMA 50 A / B / BY
EMA50A256G8/30NNX6S3PR.20	EMA 50 A / B / BY
EMA50A256G8/30NNX6S3PR.20	EMA 50 A / B / BY
EMA50A256G8/30NNX6S3PR.209	EMA 50 A / B / BY
EMA50A256G8/30RPX6X3PR	EMA 50 A / B / BY
EMA50A256G8/30UPX6S3PR+VB.162	EMA 50 A / B / BY
EMA50A360G8/30RPX6X3PR	EMA 50 A / B / BY
EMA50A360G8/30RPX6X3PR0-2+VB.377	EMA 50 A / B / BY
EMA50A360G8/30RPX6X3PR10.377	EMA 50 A / B / BY
EMA50A360G8/30UPX6X3PR0-2+VB	EMA 50 A / B / BY
EMA50A8B11/30PPS6S3PR.592	EMA 50 A / B / BY
EMA50B1024B8/30PPZE8X3PR	EMA 50 A / B / BY

Ordering code	Series
EMA50B1024G8/30CNX6S3PR	EMA 50 A / B / BY
EMA50B1024G8/30CNX8X3PR	EMA 50 A / B / BY
EMA50B256B8/30PPZEX6X3PR3.1050	EMA 50 A / B / BY
EMA50B256G8/30CNX6S3PR	EMA 50 A / B / BY
EMA50B256G8/30UPX8X3PR2	EMA 50 A / B / BY
EMA50B360B8/30PPSZE10X3PA5	EMA 50 A / B / BY
EMA50B360G8/30CNX8X3PR	EMA 50 A / B / BY
EMA50B360G8/30CNX8X3PR5	EMA 50 A / B / BY
EMA50B4096G8/30SPZE6S3PR	EMA 50 A / B / BY
EMA50B512G8/30PPZE10S3PR1+V.162+1093	EMA 50 A / B / BY
EMA50B720G8/30UPX8X3PR2	EMA 50 A / B / BY
EMA50BY1024G8/28PPX10S3PR2	EMA 50 A / B / BY
EMA50BY4096G8/30SPZE6S3M12R.162+1040	EMA 50 A / B / BY
EMA50BY8192B8/28SXX10S3PR2.354	EMA 50 A / B / BY
EMA50F1024B8/30PPX10X3PR0,2+VB	EMA 50 F / G
EMA50F1024G8/30PPX10X3PR0,2+VB	EMA 50 F / G
EMA50F360G8/30PPX15X3PA	EMA 50 F / G
EMA50G360G5SPZE10X3PR10	EMA 50 F / G
EMA50G360GC5SPZE10X3PR10	EMA 50 F / G
EMA50G4096G8/30PPX12X3PR5	EMA 50 F / G
EMA50G512G8/30PPX12X3PR2	EMA 50 F / G
EMA55A1024B5SPZE8S10PR1,5.920	EMA 55 A / AY
EMA55A2048B8/30SPX8X10PR	EMA 55 A / AY
EMA55A2048B8/30SPX8X10PR2	EMA 55 A / AY
EMA55A2048B8/30SPX8X10PR2,5	EMA 55 A / AY
EMA55A32B5SPX6X10PR	EMA 55 A / AY
EMA55A400B8/30SPX10S10PR	EMA 55 A / AY
EMA55A4096G8/28PPZE10S10PR.977	EMA 55 A / AY
EMA55A8192G5SPZE12S10PR1.1058	EMA 55 A / AY
EML50A180X12/28V010X6X3PR	EML 50 A / B / BY
EML50A270X12/28I420X8X3PA	EML 50 A / B / BY
EML50A360X12/28I020X6X3PR	EML 50 A / B / BY
EML50A360X12/28I420X10X3PA	EML 50 A / B / BY
EML50A360X12/28V010X6S3PR	EML 50 A / B / BY
EML50A360X12/28V010X6X3PR	EML 50 A / B / BY
EML50A360X12/28V010X8X3PR	EML 50 A / B / BY
EML50A360ZE12/28I420Q10S3PR2	EML 50 A / B / BY
EML50A360ZE12/28I420Q8X3PR	EML 50 A / B / BY
EML50A360ZE12/28I420X10S3PR	EML 50 A / B / BY

Ordering code	Series
EML50A360ZE12/28I420X10S3PR	EML 50 A / B / BY
EML50A360ZE12/28I420X6X3M12A	EML 50 A / B / BY
EML50A360ZE12/28I420X8S3PR.1040	EML 50 A / B / BY
EML50A90X12/28I420X8S3PR	EML 50 A / B / BY
EML50A90X12/28V010X6X3M12R	EML 50 A / B / BY
EML50A90X12/28V010X6X3PR	EML 50 A / B / BY
EML50A90X12/28V010X8X3PR	EML 50 A / B / BY
EML50A90ZE12/28I420Q8X3PR	EML 50 A / B / BY
EML50A90ZE12/28V010X10X3PR2	EML 50 A / B / BY
EML50B90ZE12/28I420Q8S3M12R	EML 50 A / B / BY
EML50BY360X12/28V010X10X3PR	EML 50 A / B / BY
EML50F180ZE12/28V05X12X3M12R.162+1040	EML 50 F / G
EML50F180ZE12/28V05X12X3M12R.162+1115	EML 50 F / G
EML50F180ZE12/28V05X15X3PR5	EML 50 F / G
EML50F270ZE12/28V010X10X3PR4.1040	EML 50 F / G
EML50F360X12/28I420X15X3M12R	EML 50 F / G
EML50F360ZE12/28V010X8X3PR5	EML 50 F / G
EML50FY360ZE12/28I420X8S3M12R	EML 50 F / G
EML50FY360ZE12/28V010X10S3PA2.1125	EML 50 F / G
EML50G360ZE12/28I420X10X3PR	EML 50 F / G
EMS22A1X5LXX10S10PR	EMS 22 A
EMS22A1X5LXX6S10PA	EMS 22 A



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