

Optical rotary encoder

Optical encoder is a sensor that makes measurements with using an optical scanning. The converter has the form of a disk fixed on the shaft and made of glass.

The optical rotary encoder differs from other types of additional optical ruler, moving when turning the shaft. At the same time, it turns the torque into a light beam, which is then received by the photoelectric sensor.

The optical converter remembers the angles of rotation. In addition, each individual position corresponds to a special digital code, which, together with the number of revolutions, forms the unit of measurement of the sensor.



Optical encoders are widely used when it is important to get high accuracy of measurements in industrial automation, material processing, lift systems and other fields.

Eltra s.p.a. offers wide range of optical absolute and incremental encoders.

Take a look at the main optical encoder series. You can find out more information at our website <https://eltra-encoder.eu>

We will help you to choose right model and deliver it worldwide in a week.

Series	Type	Shaft type	External diameter (max)	Shaft /bore diameter (max)	Resol. (min) ppr	Resol. (max) ppr	Rotation speed (max) rpm	Output frequency (max)	Operating temperature (°C)	Enclosure rating (max)
AAM 58B	absolute multiturn	solid	58	6		13+12 bit			-40..+80 C	IP65
AAM 58C	absolute multiturn	solid	58	10		13+12 bit			-40..+80 C	IP65
AAM 58F	absolute multiturn	blind hollow	58	15		13+12 bit			-40..+80 C	IP65
EAM 58B	absolute multiturn	solid	58	10	2	8192	6000 rpm		0..+60 C	IP66
EAM 58C	absolute multiturn	solid	58	10	2	8192	6000 rpm		0..+60 C	IP66
EAM 63A	absolute multiturn	solid	63,5	10	2	8192	6000 rpm		0..+60 C	IP66
EAM 63D	absolute multiturn	solid	63,5	10	2	8192	6000 rpm		0..+60 C	IP66
EAM 63E	absolute multiturn	solid	63,5	10	2	8192	6000 rpm		0..+60 C	IP66
EAM 58B Profibus	absolute multiturn	solid	58	10	4096	8192	6000 rpm		0..+60 C	IP66
EAM 58C Profibus	absolute multiturn	solid	58	10	4096	8192	6000 rpm		0..+60 C	IP66
EAM 63A Profibus	absolute multiturn	solid	63,5	10	4096	8192	6000 rpm		0..+60 C	IP66
EAM 63D Profibus	absolute multiturn	solid	63,5	10	4096	8192	6000 rpm		0..+60 C	IP66
EAM 63E Profibus	absolute multiturn	solid	63,5	10	4096	8192	6000 rpm		0..+60 C	IP66
EAM 58F	absolute multiturn	blind hollow	60	15	2	8192	3000 rpm		0..+60 C	IP54
EAM 63F	absolute multiturn	blind hollow	60	15	2	8192	3000 rpm		0..+60 C	IP54
EAM 63G	absolute multiturn	blind hollow	60	15	2	8192	3000 rpm		0..+60 C	IP54
EAM 58F Profibus	absolute multiturn	blind hollow	60	15	4096	8192	3000 rpm		0..+60 C	IP54
EAM 63F Profibus	absolute multiturn	blind hollow	60	15	4096	8192	3000 rpm		0..+60 C	IP54
EAM 63G Profibus	absolute multiturn	blind hollow	60	15	4096	8192	3000 rpm		0..+60 C	IP54
EAM 63AX Profibus	absolute multiturn	solid	63	10	4096	8192	3000 rpm		0..+60 C	IP66
EAM 63DX Profibus	absolute multiturn	solid	63	10	4096	8192	3000 rpm		0..+60 C	IP66
EAM 63AX	absolute multiturn	solid	63	10	2	8192	3000 rpm		0..+60 C	IP66
EAM 63DX	absolute multiturn	solid	63	10	2	8192	3000 rpm		0..+60 C	IP66
EAM 90A	absolute multiturn	solid	90	10	2	8192	3000 rpm		0..+60 C	IP66
EAM 115A	absolute multiturn	solid	115	11	2	8192	6000 rpm		0..+60 C	IP54
EAM 90A Profibus	absolute multiturn	solid	90	10	4096	8192	3000 rpm		0..+60 C	IP66

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EAM 115A Profibus	absolute multiturn	solid	115	11	4096	8192	6000 rpm		0..+60 C	IP54
EAMX 80A	absolute multiturn	solid	80	10	2	8192	3000 rpm		0..+50 C	IP65
EAMX 80D	absolute multiturn	solid	80	10	2	8192	3000 rpm		0..+50 C	IP65
EA 58B	absolute singleturn	solid	64	6	2	8192	6000 rpm		0..+60 C	IP66
EA 58C	absolute singleturn	solid	64	10	2	8192	6000 rpm		0..+60 C	IP66
EA 63A	absolute singleturn	solid	63,5	10	2	8192	6000 rpm		0..+60 C	IP66
EA 63D	absolute singleturn	solid	63,5	10	2	8192	6000 rpm		0..+60 C	IP66
EA 63E	absolute singleturn	solid	63,5	10	2	8192	6000 rpm		0..+60 C	IP66
EA 58F	absolute singleturn	blind hollow	64	15	2	8192	3000 rpm		0..+60 C	IP54
EA 63F	absolute singleturn	blind hollow	64	15	2	8192	3000 rpm		0..+60 C	IP54
EA 63G	absolute singleturn	blind hollow	64	15	2	8192	3000 rpm		0..+60 C	IP54
EA 58B Profibus	absolute singleturn	solid	64	6	4096	8192	6000 rpm		0..+60 C	IP66
EA 58C Profibus	absolute singleturn	solid	64	10	4096	8192	6000 rpm		0..+60 C	IP66
EA 63A Profibus	absolute singleturn	solid	64	10	4096	8192	6000 rpm		0..+60 C	IP66
EA 63D Profibus	absolute singleturn	solid	63,5	10	4096	8192	6000 rpm		0..+60 C	IP66
EA 63E Profibus	absolute singleturn	solid	63,5	10	4096	8192	6000 rpm		0..+60 C	IP66
EA 58F Profibus	absolute singleturn	blind hollow	64	15	4096	8192	3000 rpm		0..+60 C	IP54
EA 63F Profibus	absolute singleturn	blind hollow	64	15	4096	8192	3000 rpm		0..+60 C	IP54
EA 63G Profibus	absolute singleturn	blind hollow	64	15	4096	8192	3000 rpm		0..+60 C	IP54
EA 63AX	absolute singleturn	solid	63	10	2	8192	3000 rpm		0..+60 C	IP66
EA 63DX	absolute singleturn	solid	63	10	2	8192	3000 rpm		0..+60 C	IP66
EA 63AX Profibus	absolute singleturn	solid	63	10	4096	8192	3000 rpm		0..+60 C	IP66
EA 63DX Profibus	absolute singleturn	solid	63	10	4096	8192	3000 rpm		0..+60 C	IP66
EA 90A	absolute singleturn	solid	90	10	2	8192	3000 rpm		0..+60 C	IP66
EA 115A	absolute singleturn	solid	115	11	2	8192	6000 rpm		0..+60 C	IP54
EA 90A Profibus	absolute singleturn	solid	90	10	4096	8192	3000 rpm		0..+60 C	IP66
EA 115A Profibus	absolute singleturn	solid	115	11	4096	8192	6000 rpm		0..+60 C	IP54
EAX 80A	absolute singleturn	solid	80	10	2	8192	3000 rpm		0..+50 C	IP65
EAX 80D	absolute singleturn	solid	80	10	2	8192	3000 rpm		0..+50 C	IP65
EF 36K	incremental	blind hollow	36	10	500	1024	6000 rpm	150 kHz	-10..+85 C	IP40
EH 80C	incremental	blind hollow	80	15	200	2048	6000 rpm	105 kHz	-20..+85 C	IP54
EH 80K	incremental	blind hollow	80	15	200	2048	6000 rpm	105 kHz	-20..+85 C	IP54
EH 80P	incremental	through hollow	80	15	200	2048	3000 rpm	105 kHz	-20..+85 C	IP54
EF 80C	incremental	blind hollow	80	15	200	2048	6000 rpm	105 kHz	-20..+85 C	IP54
EF 80K	incremental	blind hollow	80	15	200	2048	6000 rpm	105 kHz	-20..+85 C	IP54
EF 80P	incremental	through hollow	80	15	200	2048	3000	105 kHz	-20..+85 C	IP54
EH 88P	incremental	through hollow	88	30	250	2500	3000	105 kHz	-25..+85 C	IP65
EL 88P	incremental	through hollow	88	30	2	2048	3000	105 kHz	-25..+85 C	IP65
EH 17M	incremental	kit encoder	38	6,35	50	1024	6000	105 kHz	-20..+60 C	IP40
EH 30M	incremental	kit encoder	53	6,35	50	1024	6000	105 kHz	-20..+60 C	IP54
EH 17MH	incremental	kit encoder	38	6,35	2000	5000	6000	500 kHz	-20..+85 C	IP40
EH 30MH	incremental	kit encoder	53	6,35	2000	5000	6000	500 kHz	-20..+85 C	IP54
EH 50FA	incremental	through hollow	50	10	100	1024	6000	105 kHz	-40..+100 C	IP65
EH 50FP	incremental	through hollow	50	10	100	1024	6000	105 kHz	-40..+100 C	IP65
EH 80PU	incremental	through hollow	80	15	1000	2048	3000	105 kHz	-20..+85 C	IP54
EH 88PE	incremental	through hollow	88	40	500	2500	3000	105 kHz	-30..+85 C	IP54
EH 88PET	incremental	through hollow	88	30	500	2500	3000	105 kHz	-30..+85 C	IP54
EH 99P	incremental	blind hollow	99	16	1000	2048	3000	105 kHz	-40..+85 C	IP67
EL 49C	incremental	blind hollow	49	12,7	100	2048	6000	150 kHz	-20..+85 C	IP40
EL 49P	incremental	through hollow	49	12,7	100	2048	6000	150 kHz	-20..+85 C	IP40
EF 49C	incremental	blind hollow	49	12,7	100	2048	6000	150 kHz	-20..+85 C	IP40

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EF 49P	incremental	through hollow	49	12,7	100	2048	6000	150 kHz	-20..+85 C	IP40
EL 38F	incremental	blind hollow	39,5	10	1	14400	3000	150 kHz	-10..+60 C	IP65
EL 38G	incremental	blind hollow	39,5	10	1	14400	3000	150 kHz	-10..+60 C	IP65
ER 38F	incremental	blind hollow	39,5	10	1	14400	3000	500 kHz	-20..+85 C	IP65
ER 38G	incremental	blind hollow	39,5	10	1	14400	3000	500 kHz	-20..+85 C	IP65
EL 53A	incremental	blind hollow	53,5	10	1	10000	3000	500 kHz	-10..+60 C	IP64
EL 53B	incremental	blind hollow	53,5	10	1	10000	3000	500 kHz	-10..+60 C	IP64
ER 53A	incremental	blind hollow	53,5	10	1	10000	3000	500 kHz	-25..+85 C	IP64
ER 53B	incremental	blind hollow	53,5	10	1	10000	3000	500 kHz	-25..+85 C	IP64
EH 53A	incremental	blind hollow	53,5	10	1	10000	6000	500 kHz	-10..+60 C	IP54
EH 53B	incremental	blind hollow	53,5	10	1	10000	6000	500 kHz	-10..+60 C	IP54
EL 58F	incremental	blind hollow	58	15	1	24000	3000	500 kHz	-10..+60 C	IP66
EL 58G	incremental	blind hollow	58	15	1	24000	3000	500 kHz	-10..+60 C	IP66
ER 58F	incremental	blind hollow	58	15	1	24000	3000	500 kHz	-20..+70 C	IP66
ER 58G	incremental	blind hollow	58	15	1	24000	3000	500 kHz	-20..+70 C	IP66
EL 63F	incremental	blind hollow	63,5	15	1	24000	3000	500 kHz	-10..+60 C	IP66
EL 63G	incremental	blind hollow	63,5	15	1	24000	3000	500 kHz	-10..+60 C	IP66
ER 63F	incremental	blind hollow	63,5	15	1	24000	3000	500 kHz	-20..+70 C	IP66
ER 63G	incremental	blind hollow	63,5	15	1	24000	3000	500 kHz	-20..+70 C	IP66
EL 120P	incremental	through hollow	120	60	400	2048	3000	105 kHz	-25..+70 C	IP54
EL 72A	incremental	blind hollow	72	10	1	24000	6000	500 kHz	-10..+60 C	IP66
EL 72B	incremental	blind hollow	72	10	1	24000	6000	500 kHz	-10..+60 C	IP66
ER 72A	incremental	blind hollow	72	10	1	24000	6000	500 kHz	-25..+85 C	IP66
ER 72B	incremental	blind hollow	72	10	1	24000	6000	500 kHz	-25..+85 C	IP66
EL 48C	incremental	blind hollow	48	8	100	2048	6000	150 kHz	-20..+85 C	IP40
EL 48P	incremental	through hollow	48	8	100	2048	6000	150 kHz	-20..+85 C	IP40
EL 63FB	incremental	blind hollow	63,5	15	1	2500	3000	300 kHz	-10..+60 C	IP54
EL 63GB	incremental	blind hollow	63,5	15	1	2500	3000	300 kHz	-10..+60 C	IP54
EL 63PB	incremental	through hollow	63,5	15	1	2500	3000	300 kHz	-10..+60 C	IP54
EL 63PBF	incremental	through hollow	63,5	15	1	2500	3000	300 kHz	-10..+60 C	IP54
EL 63PC	incremental	through hollow	63,5	15	1	2500	3000	300 kHz	-10..+60 C	IP54
EL 63PCF	incremental	through hollow	63,5	15	1	2500	3000	300 kHz	-10..+60 C	IP54
EH 115A	incremental	solid	115	11	200	2048	6000	105 kHz	-10..+60 C	IP66
EH 115R	incremental	solid	115	11	200	2048	6000	105 kHz	-10..+60 C	IP66
EH 90A	incremental	solid	90	11	200	2048	6000	105 kHz	-10..+60 C	IP66
EH 38A	incremental	solid	38	6	50	1024	3000	100 kHz	-20..+70 C	IP54
EH 38B	incremental	solid	38	6	50	1024	3000	100 kHz	-20..+70 C	IP54
EH 38D	incremental	solid	38	6	50	1024	3000	100 kHz	-20..+70 C	IP54
EL 115A	incremental	solid	115	11	1	10000	6000	500 kHz	-10..+60 C	IP54
ER 115A	incremental	solid	115	11	1	10000	6000	500 kHz	-20..+85 C	IP54
EL 90A	incremental	solid	90	10	1	10000	6000	500 kHz	-10..+60 C	IP66
ER 90A	incremental	solid	90	10	1	10000	6000	500 kHz	-20..+85 C	IP66
EL 30E	incremental	solid	30	6	1	2500	3000	100 kHz	-10..+60 C	IP54
ER 30E	incremental	solid	30	6	1	2500	3000	220 kHz	-25..+85 C	IP54
EL 30H	incremental	solid	30	6	1	2500	3000	100 kHz	-10..+60 C	IP54
ER 30H	incremental	solid	30	6	1	2500	3000	220 kHz	-25..+85 C	IP54
EL 40A	incremental	solid	42	6	1	14400	3000	220 kHz	-10..+60 C	IP66
EL 40B	incremental	solid	42	6	1	14400	3000	220 kHz	-10..+60 C	IP66
EL 40C	incremental	solid	42	6	1	2500	6000	220 kHz	-10..+60 C	IP54
EL 40E	incremental	solid	42	6	1	2500	6000	220 kHz	-10..+60 C	IP54
EL 40H	incremental	solid	42	6	1	2500	6000	220 kHz	-10..+60 C	IP54
EL 40I	incremental	solid	42	6	1	2500	6000	220 kHz	-10..+60 C	IP54
EL 40N	incremental	solid	42	6	1	2500	6000	220 kHz	-10..+60 C	IP54
EL 40X	incremental	solid	42	8	1	2500	6000	220 kHz	-10..+60 C	IP54
ER 40A	incremental	solid	42	6	1	14400	3000	220 kHz	-25..+85 C	IP66

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ER 40B	incremental	solid	42	6	1	14400	3000	220 kHz	-25..+85 C	IP66
ER 40C	incremental	solid	42	6	1	2500	6000	220 kHz	-25..+85 C	IP54
ER 40E	incremental	solid	42	6	1	2500	6000	220 kHz	-25..+85 C	IP54
ER 40H	incremental	solid	42	6	1	2500	6000	220 kHz	-25..+85 C	IP54
ER 40I	incremental	solid	42	6	1	2500	6000	220 kHz	-25..+85 C	IP54
ER 40N	incremental	solid	42	6	1	2500	6000	220 kHz	-25..+85 C	IP54
ER 40X	incremental	solid	42	8	1	2500	6000	220 kHz	-25..+85 C	IP54
EL 58B	incremental	solid	58	10	1	24000	6000	500 kHz	-10..+60 C	IP66
EL 58C	incremental	solid	58	10	1	24000	6000	500 kHz	-10..+60 C	IP66
EL 58H	incremental	solid	58	10	1	24000	6000	500 kHz	-10..+60 C	IP66
EL 58T	incremental	solid	58	12	1	24000	6000	500 kHz	-10..+60 C	IP66
ER 58B	incremental	solid	58	10	1	24000	6000	500 kHz	-25..+85 C	IP66
ER 58C	incremental	solid	58	10	1	24000	6000	500 kHz	-25..+85 C	IP66
ER 58H	incremental	solid	58	10	1	24000	6000	500 kHz	-25..+85 C	IP66
ER 58T	incremental	solid	58	12	1	24000	6000	500 kHz	-25..+85 C	IP66
EL 63A	incremental	solid	63	10	1	24000	6000	500 kHz	-10..+60 C	IP66
EL 63D	incremental	solid	63	10	1	24000	6000	500 kHz	-10..+60 C	IP66
EL 63E	incremental	solid	63	10	1	24000	6000	500 kHz	-10..+60 C	IP66
ER 63A	incremental	solid	63	10	1	24000	6000	500 kHz	-25..+85 C	IP66
ER 63D	incremental	solid	63	10	1	24000	6000	500 kHz	-25..+85 C	IP66
ER 63E	incremental	solid	63	10	1	24000	6000	500 kHz	-25..+85 C	IP66
EL 63AX	incremental	solid	63	10	1	24000	3000	500 kHz	-10..+60 C	IP66
EL 63DX	incremental	solid	63	10	1	24000	3000	500 kHz	-10..+60 C	IP66
ER 63AX	incremental	solid	63	10	1	24000	3000	500 kHz	-25..+85 C	IP66
ER 63DX	incremental	solid	63	10	1	24000	3000	500 kHz	-25..+85 C	IP66
EX 80A	incremental	solid	80	10	100	10000	3000	500 kHz	-20..+50 C	IP65
EX 80D	incremental	solid	80	10	100	10000	3000	500 kHz	-20..+50 C	IP65

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