

Technisch gegevensblad Informatie over de encoderseries

Art.-nr.: 90000370

EI30-P 058 TM

Inhoud

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Afbeelding kan afwijken

Encoder_serie	EI 058 TM
Encoder_basisprincipe	incrementeel
Encoder_functieprincipe	optisch geïnterpoleerd
Encoder_flensdiameter	Ø 58 mm
Encoder_flenstype	Tachometerflens
Encoder_massieve as/holle as	Massieve as
Encoder_voedingsspanning	10 ... 30 V DC
	4,75 ... 5,5 V DC
	5 ... 30V DC
Encoder_uitgangscircuit	1 Vss Sin/Cos
	HTL
	HTL, inv.
	TTL
	TTL, RS422 compatibel, inv.
Encoder_aantal impulsen	10000 I/U
	10240 I/U
	12000 I/U
	12500 I/U
	1440 I/U
	15000 I/U
	16384 I/U
	20000 I/U
	20480 I/U
	25000 I/U
	2880 I/U
	3000 I/U
	3600 I/U
	4000 I/U
	5760 I/U
	6000 I/U
	7200 I/U
	7500 I/U
	8000 I/U
	9182 I/U

Technische gegevens

Encoder EI30 P 058 TM

Resolution

Pulses per revolution PPR	up to 25000 PPR
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Mechanical Data

Flange	motorfeedback flange
Flange material	aluminum
Housing material	aluminum
Flange diameter	Ø 58 mm [Ø 2.283"]

Shaft(s)

Shaft material	stainless steel
Starting torque	approx. 1 Ncm [1.416 in-ozf] at ambient temperature

Shaft	Ø Conus 1/10; 9.25 mm [Ø 3/8"] Order No. 10
Shaft length	L: 16.5 mm [0.65"]
Max. Permissible shaft loading radial	80 N [8.157 kp]
Max. Permissible shaft loading axial	60 N [6.118 kp]

Bearings

Bearings type	2 precision ball bearings
Nominale service life	1 x 10 ⁹ revs. at 100 % rated shaft load 1 x 10 ¹⁰ revs. at 40 % rated shaft load 1 x 10 ¹¹ revs. at 20 % rated shaft load
Max. operating speed	12000 rpm

Machinery Directive: basic data safety integrity level

MTTF _a	200 a
Mission time (TM)	25 a
Nominale service life (L10h)	1 x 10 ¹¹ revs. at 20 % rated shaft load and 12000 rpm
Diagnostic coverage (DC)	0 %

Electrical Data

Power supply/Current consumption	4,75 VDC up to 5,5 VDC: typ. 70 mA (100 mA only C3, D3)
Power supply/Current consumption	5 VDC up to 30 VDC: typ. 70 mA
Power supply/Current consumption	10 VDC up to 30 VDC: typ. 70 mA (100 mA only C2, C4, D4)
Operating principle	optical
Output circuit	TTL TTL, RS422 compatible, inv. HTL HTL, inv. 1 Vpp sin/cos
Pulse frequency	TTL ≤ 5000 ppr: max. 200 kHz HTL ≤ 5000 ppr: max. 200 kHz TTL more than 1200 ppr: max. 2 MHz HTL more than 1200 ppr: max. 600 kHz 1 Vpp sin/cos: max. 100 kHz
Channels	B N and inverted signals
Load	max. 40 mA / channel @ 1 Vpp sin/cos: min. 120 Ohm
Circuit protection	circuit type C4, C6, D4, D6 only

Accuracy

Phase offset	90° ± max. 7.5 % of the period duration
pulse-/pause-ratio	≤5000 ppr: 50 % ± max. 7 % Output circuits C2, C3, C4, D3, D4: 50 % ± max. 10 %

Environmental data

ESD (DIN EN 61000-4-2):	8 kV
Burst (DIN EN 61000-4-4):	2 kV
includes EMC:	DIN EN 61000-6-2 DIN EN 61000-6-3
Vibration: (DIN EN 60068-2-6)	50 m/s ² (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	1000 m/s ² (6 ms)
Electrical Safety:	according DIN VDE 0160

Duty information

Customs tariff number:	90318020
Country of origin:	Germany

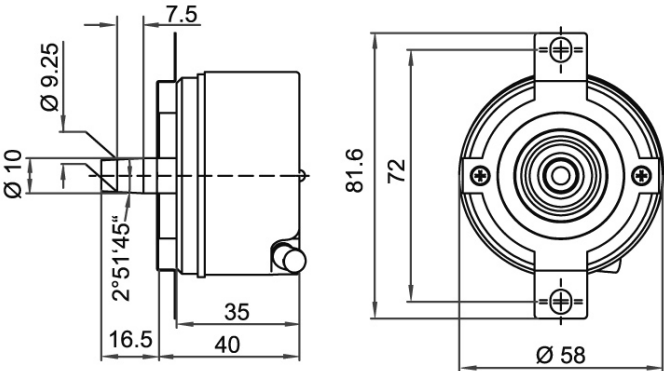
General Data

Weight	approx. 220 g [7.76 oz]
Connections	cable output, 2 m, tangential
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-20 °C up to +80 °C [-4 °F up to +176 °F] 1 Vpp: -10 °C up to +70 °C [+14 °F up to +158 °F]
Storage temperature	-20 °C up to +80 °C [-4 °F up to +176 °F]

Technische gegevens

Encoder EI30 P 058 TM

Cable connection T-C, tangential, with 2 m cable



All dimensions in mm

Description

N inv. poss.

T-C tangential, shield connected to encoder housing

Assignments

	T-C	T-C	T-C
Circuit	C3, C4, C5, C6, C7	C1, C2, D3, D4, D5, D6, D7	D8
GND	WH	WH	WH
(+) Vcc	BN	BN	BN
A	GN	GN	GN
B	YE	YE	GY
N	GY	GY	-
-	-	-	-
A inv.	-	RD	YE
B inv.	-	BK, (BU at LT)	PK
N inv.	-	VT	-
Shield	flex	flex	flex

Technische gegevens

Encoder EI30 P 058 TM

Options

Low-friction bearings	Order key
The encoder EI30 P 058 TM is also available as a particularly smooth- running low-friction encoder. The starting torque is thereby changed to ≤ 0.5 Ncm [0.708 in-ozf] and the protection class at the shaft input to IP50.	LB
Cable length	Order key
The encoder EI30 P 058 TM can be supplied with more than 2 m cable. The maximum cable length depends on the supply voltage and the frequency. Please extend the standard order code with a three figure number, specifying the cable length in decimetres. Example: 5 m cable = 050	XXX = Decimeter

Technische gegevens

Encoder EI30 P 058 TM

Example Order No.	Type
EI30 P 058 TM	EI30 P 058 TM

Pulses per revolution PPR:

1024	4, 6, 25, 36, 50, 60, 64, 70, 88, 100, 120, 125, 150, 180, 200, 240, 250, 256, 300, 360, 400, 500, 512, 600, 720, 750, 768, 800, 900, 1000, 1024, 1200, 1250, 1270, 1500, 1800, 2000, 2048, 2500, 3000, 3600, 4000, 4096, 5000, 8000, 8192, 10000, 10240, 12500, 16384, 20000, 20480, 25000 1 Vpp Sin/Cos only 1024, 2048 Other PPRs on request
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Channels:

N	N, B (SIN: B)
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Output circuit

	Resolution PPR	Power supply VDC	Output circuit	-	Order key
C6	up to 2500	5 - 30	HTL (TTL at 5 VDC)	–	C7
		5 - 30	HTL, inv. (TTL/RS422 comp. at 5 VDC)	–	D7
	up to 5000	4.75 - 5.5	TTL	–	C5
		4.75 - 5.5	TTL, RS422 comp., inverted	–	D5
		10 - 30	HTL	–	C6
		10 - 30	HTL inverted	–	D6
		10 - 30	TTL, RS422 comp., inverted	–	C1
		10 - 30	TTL, RS422 comp., inverted	–	D3
	(higher frequency) 1200 up to 25000	4.75 - 5.5	TTL	–	C3
		4.75 - 5.5	TTL, RS422 comp., inverted	–	D3
		10 - 30	HTL	–	C4
		10 - 30	HTL inverted	–	D4
		10 - 30	TTL, RS422 comp., inverted	–	C2
	1024, 2048	4.75 - 5.5	1 Vpp sin/cos	–	D8

Electrical connections

	Description	N inv. poss.	Order key
T-C	Cable: length (2 m standard) tangential, shield connected to encoder housing	•	T-C

Options

Description	Order key
Low-friction bearings	LB
Without option	Empty
Cable length	XXX = Decimeter

Example Order No.:	EI30 P 058 TM	1024	N	C6	T-C	EI30 P 058 TM	Your encoder
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Artikelsleutel

Artikelaanduiding: **EABB CCCDDEE FFFFFF GHJJKK LLMNOPPP RR**

A	Type encoder I: incrementeel S: Absolut, Singleturn M: Absolut, Multiturn
BB	Serie 10: Entry 30: Basic 50: Extended 70: Advanced
CCC	Flensdiameter 024: 24 mm 036: 36 mm 058: 58 mm 063: 63 mm 067: 67 mm 070: 70 mm 080: 80 mm 100: 100 mm 115: 115 mm
DD	Flenstype BB: holle as met blindgat CC: klemflens (compacte uitvoering) CF: klemflens (voedingsmiddelen en dranken) CH: klemflens (uitvoering voor zware belasting) CL: klemflens HL: holle as (geïsoleerd) HO: holle as HT: holle as (speciale koppelsteun) RC: ronde flens (36/40 klemflens, 58 met 6 mm-as) RE: ronde flens (vergroete boringen) RN: ronde flens SC: statorkoppeling SF: schroefflens (53 klemflens, 58 levensmiddelen en dranken) SI: Servoflens (verhoogde asbelasting en IP-bescherming) SQ: vierkante flens SR: schroefflens (36/40 klemflens, 58 corrosiebestendig) SY: Synchro (incrementaal), Servo (36), Synchro (58) (absoluut) TM: snelheidsmeter (115 met as van 1 mm, 58 met motorfeedback) TS: snelheidsmeter (10 mm-as)
EE	Schacht-/boringsdiameter 06: 6 mm 07: 7 mm 08: 8 mm 08: 8 mm 10: 10 mm 11: 11 mm 12: 12 mm 14: 14 mm 15: 15 mm 06-72: doorlopende/blinde boring (6 ... 72 mm)
FFFFFF	Signaal/oplossing Axxxx: A Bxxxx: AB Nxxxx: ABN P16384: programmeerbaar xx: Singleturn, 1 ... 16 Bit xx: Multiturn, 0 ... 43 Bit (00 bij Singleturn)
G	Galvanische scheiding (alleen absoluut) 0: zonder 1: met
HH	Spanningsvoorziening (alleen absoluut) 0: 10 ... 32 V DC/met galvanische scheiding 1: 4,75 ... 5,5 V DC 2: 18 ... 30 V DC
J	Werkingsprincipe M: magnetisch O: optisch P: optisch geïnterpoleerd

Artikelsleutel

KK	Interface 01: RS485 07: SSI binair 08: SSI Gray 35: CANopen 38: EtherCAT 48: PROFINET 58: EtherNet/IP
LL	Elektrische aansluiting M08: ronde stekker M8 M12: ronde stekker M12 M16: ronde stekker M16 M23: ronde stekker M23 M12BC: stekker voor buskap
M	Kabeluitgang A: axiaal R: radiaal T: Tangential
NN	Aantal polen xx: aantal polen
O	Afschermingsverbinding (kabel van 2 m) (optioneel) C: aangesloten N: niet aangesloten
PPP	Kabellengte xxx: kabellengte (in dm)

Opmerking



↗ Een lijst met alle beschikbare apparaattypen vindt u op de webpagina van Leuze via www.leuze.com.

