

Technisch gegevensblad Informatie over de encoderseries

Art.-nr.: 90000380

EI30-P 058 SF

Inhoud

- Technische gegevens
- Artikelsleutel



Afbeelding kan afwijken

Encoder_serie	EI 058 SF
Encoder_basisprincipe	incrementeel
Encoder_functieprincipe	optisch geïnterpoleerd
Encoder_flensdiameter	Ø 58 mm
Encoder_flenstype	Schroef
Encoder_massieve as/holle as	Holle as
Encoder_asdiameter	Ø 10 mm
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
Encoder_aantal impulsen	TTL, RS422 compatibel, inv.
	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 SF

Resolution

Pulses per revolution PPR	up to 25000 PPR
---------------------------	-----------------

Mechanical Data

Flange	clamping flange
Flange material	stainless steel, V4A
Housing material	stainless steel, V4A
Flange diameter	Ø 58 mm [Ø 2.283"]

Shaft(s)

Shaft material	stainless steel, V4A
Starting torque	approx. 1 Ncm [1.416 in-ozf] at ambient temperature

Shaft	Ø 10 mm [Ø 0.394"]
Shaft length	L: 18 mm [0.709"]
Max. Permissible shaft loading radial	100 N [10.197 kp]
Max. Permissible shaft loading axial	100 N [10.197 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	3600 rpm

Machinery Directive: basic data safety integrity level

MTTF _d	200 a
Mission time (TM)	25 a
Nominale service life (L10h)	1 x 10 ¹¹ revs. at 20 % rated shaft load and 3600 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

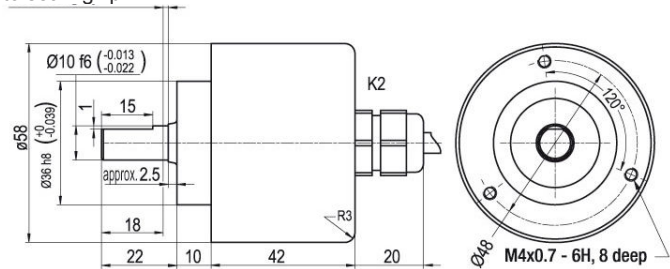
Weight	approx. 600 g [21.164 oz]
Connections	cable outlet (TPE)
Protection rating (EN 60529)	IP67+IP69K all around. Resistance to salt mist (IEC 60068-2-11) after 672 hours.
Operating temperature	-20 °C up to +80 °C [-4 °F up to +176 °F] 1 Vpp: -10 °C up to +70 °C [+14 °F up to +158 °F]
Storage temperature	-20 °C up to +80 °C [-4 °F up to +176 °F]

Technische gegevens

Encoder EI30 P 058 SF

Cable connection A-N, A-C, axial, with 2 m cable

Minimum distance of 1.5
to sealing lip



All dimensions in mm

Description

N inv. poss.

A-N	axial, shield not connected	•
A-C	axial, shield connected to encoder housing	•

Assignments

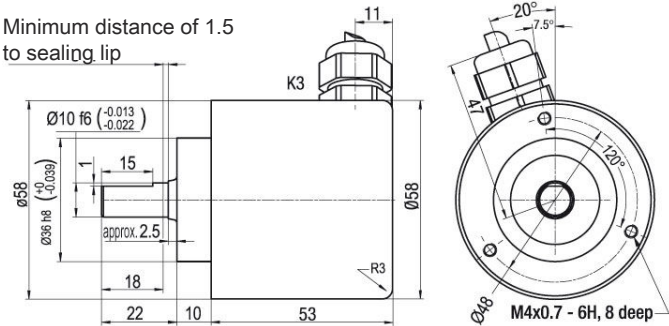
	A-N, A-C	A-N, A-C	A-C
Circuit	C3, C4, C5, C6, C7	C1, C2, D3, D4, D5, D6, D7	D8
GND	WH	WH	WH
(+) Vcc	BN	BN	BN
A	GN	GN	GN
B	YE	YE	GY
N	GY	GY	–
–	–	–	–
A inv.	–	RD	YE
B inv.	–	BU	PK
N inv.	–	VT	–
Shield	flex	flex	flex

Technische gegevens

Encoder EI30 P 058 SF

Cable connection R-N, R-C, radial, with 2 m cable

Minimum distance of 1.5
to sealing lip



All dimensions in mm

Description

N inv. poss.

R-N	radial, shield not connected	•
R-C	radial, shield connected to encoder housing	•

Assignments

	R-N, R-C	R-N, R-C	R-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.	–	BU	PK
N inv.	–	VT	–
Shield	flex	flex	flex

Technische gegevens

Encoder EI30 P 058 SF

Options

Cable length	Order key
The encoder EI30 P 058 SF 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 SF

Example Order No. Type

EI30 P 058 SF	EI30 P 058 SF	EI30 P 058 SF
---------------	---------------	---------------

Pulses per revolution PPR:

5000	2, 5, 10, 15, 20, 25, 30, 36, 40, 48, 50, 60, 64, 72, 90, 100, 120, 125, 128, 150, 160, 180, 200, 216, 240, 250, 254, 256, 300, 314, 320, 360, 400, 500, 512, 571, 600, 720, 750, 768, 800, 900, 1000, 1024, 1200, 1250, 1270, 1440, 1500, 1800, 2000, 2048, 2400, 2500, 2880, 3000, 3600, 4000, 4096, 4685, 5000, 5760, 6000, 7200, 7500, 8000, 8192, 10000, 10240, 12000, 12500, 15000, 16384, 20000, 20480, 25000 1 Vpp Sin/Cos only 1024, 2048 Other PPRs on request
------	--

Channels:

N	B, N (SIN: B)
---	---------------

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
	(higher frequency) 1200 up to 25000	10 - 30	TTL, RS422 comp., inverted	C1
		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
Cable: length (2 m standard)		
A-N axial, shield not connected	•	A-N
axial, shield connected to encoder housing	•	A-C
radial, shield not connected	•	R-N
radial, shield connected to encoder housing	•	R-C

Options

Description	Order key
Without option	Empty
Cable length	XXX = Decimeter

Example Order No.:	EI30P058SF	10	5000	N	C6	A-N	EI30P058SF	Your encoder
--------------------	------------	----	------	---	----	-----	------------	--------------

Artikelsleutel

Artikelaanduiding: EABB CCCDDEE FFFFFFF 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.

