기술 데이터 시트
엔코더 시리즈 정보
품목 번호: 90000040
EI30-M 036 SI



그림과 차이가 날 수 있습니다

내용

- 기술 데이터
- 제품 키워드

인코더_시리즈	EI 036 SI
인코더_기본 원리	증분형
인코더_작동 원리	자기식
인코더_플랜지 직경	Ø 36mm
인코더_플랜지 유형	서보 플랜지
인코더_실축/중공축	실축
인코더_축 직경	Ø 10mm
인코더_공급전압	4.75 ~ 32V DC
인코더_출력 회로	HTL
	반전 HTL
인코더_펄스 수	1 ~ 16384I/U

기술 데이터

Encoder EI30 M 036 SI

Resolution

Pulses per revolution PPR	1 PPR up to 16384 PPR

Mechanical Data

Flange	servo flange
Flange material	aluminum
Housing material	stainless steel
Flange diameter	Ø 36 mm [Ø 1.417"]
Cam mounting	pitch 48 mm [1.89 inches]

Shaft(s)

Shaft material	stainless steel
Starting torque	approx. 1 Ncm [1.416 in-ozf] at ambient temperature
Shaft	Ø 10 mm [Ø 0.394"]
Shaft length	L: 20 mm [0.787"]
Max. Permissible shaft loading radial	300 N [30.59 kp]
Max. Permissible shaft loading axial	300 N [30.59 kp]

Bearings

Bearings type	2 precision ball bearings
Nominale service life	5 x 10'8 revs. at 100 % rated shaft load x 10'9 revs. at 40 % rated shaft load x 10'10 revs. at 20 % rated shaft load
Max. operating speed	6000 rpm

Machinery Directive: basic data safety integrity level

$MTTF_d$	2200 a
Mission time (TM)	25 a
Nominale service life (L10h)	3.1 x 10'10 revs. at 20 % rated shaft load and 6000 rpm
Diagnostic coverage (DC)	0 %

Electrical Data

Power supply/Current con-sumption	4.75 VDC up to 30 VDC: typ. 40 mA
Operating principle	magnetic
Output circuit	HTL (TTL at 5 VDC) HTL, inv. (TTL/RS422 comp. at 5 VDC)
Pulse frequency	HTL up to 16384 ppr: max. 600 kHz TTL up to 16384 ppr: max. 1 MHz
Channels	N and inverted signals
Load	max. 40 mA / channel
Circuit protection	yes

Accuracy

Phase offset	90° ± max. 7.5 % of the period duration
pulse-/pause-ratio	50 % ± max. 7 %

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)
Electrial Safety:	according DIN VDE 0160

Duty information

Customs tariff number:	90318020
Country of origin:	Germany

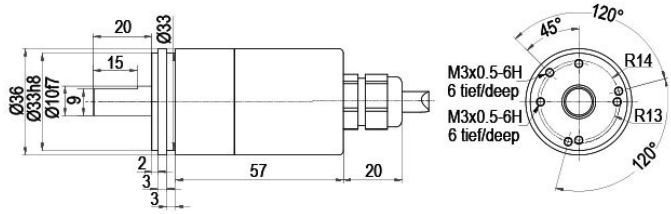
General Data

Weight	approx. 210 g [7.407 oz]
Connections	cable or connector outlet
Protection rating (EN 60529)	IP67+IP69K all around
Operating temperature	Connector: -40 °C up to +85 °C, Cable: -20 °C up to +80 °C (Option LT: -40 °C up to +85 °C). Connector: -40 °F up to +185 °F, Cable: -4 °F up to +176 °F, Option LT: -40 °F up to +185 F°
Storage temperature	Connector: -40 °C up to +85 °C, Cable: -30 °C up to +80 °C (Option LT: -40 °C up to +85 °C) Connector: -40 °F up to +185 °F, Cable: -22 °F up to +176 °F, (Option LT: -40 °F up to +185 °F)

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Encoder EI30 M 036 SI

Cable connection A-C axial with 2 m cable



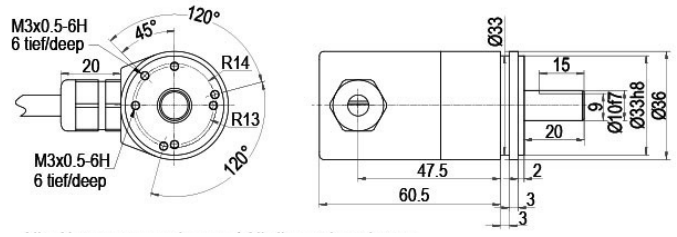
All dimensions in mm

Description		N inv. poss.
A-C	axial, shield connected to encoder housing	•

Assignments

	A-C	A-C
Circuit	D2	D1
GND	WH	WH
(+) Vcc	BN	BN
A	GN	GN
B	YE	YE
N	GY	GY
–	–	–
A inv.	–	RD
B inv.	–	BK, (BU at LT)
N inv.	–	VT
Shield	flex	flex

Cable connection R-C radial with 2 m cable



All dimensions in mm

Description		N inv. poss.
R-C	radial, shield connected to encoder housing	•

Assignments

	R-C	R-C
Circuit	D2	D1
GND	WH	WH
(+) Vcc	BN	BN
A	GN	GN

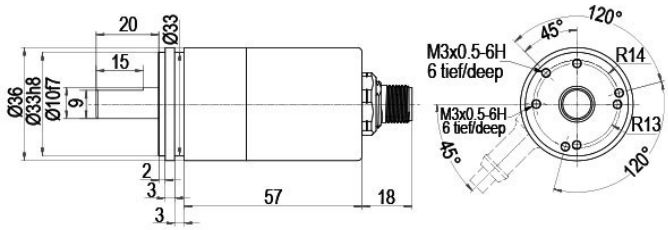
기술 데이터

Encoder EI30 M 036 SI

Assignments

B	YE	YE
N	GY	GY
–	–	
A inv.	–	RD
B inv.	–	BK, (BU at LT)
N inv.	–	VT
Shield	flex	flex

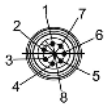
Sensor connector (M12x1) AS, axial, 5-, 8-pin



All dimensions in mm

Description		N inv. poss.
AS5	axial, 5-pin, Connector connected to encoder housing	–
AS8	axial, 8-pin, Connector connected to encoder housing	•

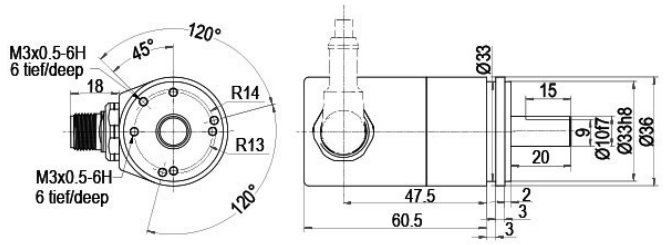
Assignments

	AS5	AS8
	5-pin	8-pin
		
Circuit	D2	D1
GND	3	1
(+) Vcc	1	2
A	4	3
B	2	4
N	5	5
–	–	
A inv.	–	6
B inv.	–	7
N inv.	–	8
n. c.	–	–
Shield	–	–

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Encoder EI30 M 036 SI

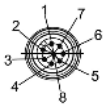
Sensor-connector (M12x1) RS, radial, 5-, 8-pin



All dimensions in mm

Description		N inv. poss.
RS5	radial, 5-pin, Connector connected to encoder housing	–
RS8	radial, 8-pin, Connector connected to encoder housing	•

Assignments

	RS5	RS8
	5-pin	8-pin
		
Circuit	D2	D1
GND	3	1
(+) Vcc	1	2
A	4	3
B	2	4
N	5	5
–	–	
A inv.	–	6
B inv.	–	7
N inv.	–	8
n. c.	–	–
Shield	–	–

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Encoder EI30 M 036 SI

Options

Low temperature	Order key
The encoder EI30 M 036 SI with the output circuit types D2, D1 is also available with the extended temperature range -40 °C up to +85 °C [-40 °F up to +185 °F] (measured at the flange).	LT

Cable length	Order key
The encoder EI30 M 036 SI 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

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Encoder EI30 M 036 SI

Example Order No.	Type	
EI30 M 036 SI	EI30 M 036 SI	EI30 M 036 SI

Shaft

10	10

Pulses per revolution PPR:

16384	1-16384 Other PPRs on request

Channels:

N	N

Output circuit

	Resolution PPR	Power supply VDC	Output circuit	–	Order key
D1	1-16384	4.75 - 30	HTL (TTL at 5 VDC)	–	D2
		4.75 - 30	HTL, inv. (TTL/RS422 comp. at 5 VDC)	–	D1

Electrical connections

	Description	N inv. poss.	Order key
A-C	**Cable: length (2 m standard)**		
	axial, shield connected to encoder housing	•	A-C
	radial, shield connected to encoder housing	•	R-C
	Connector: (shield connected to encoder housing)		
	sensor-connector, M12x1, 5-pin, axial	–	AS5
	sensor-connector, M12x1, 5-pin, radial	–	RS5
	sensor-connector, M12x1, 8-pin, axial	•	AS8
	sensor-connector, M12x1, 8-pin, radial	•	RS8

Options

Description	Order key
Low temperature	LT
Without option	Empty
Cable length	XXX = Decimeter

Example Order No.:	EI30 M 036 SI	10	16384	N	D1	A-C	EI30 M 036 SI	**Your encoder**

제품 키워드

제품 명칭: **EABB CCCDDEE FFFFFF GHHJKK LLMNNOPPP RR**

A	**회전 센서 유형** I: 증분형 S: 절대형, 싱글턴 M: 절대형, 멀티턴
BB	**시리즈** 10: Entry 30: 기본 50: 확장형 70: Advanced
CCC	**플랜지 직경** 024: 24mm 036: 36mm 058: 58mm 063: 63mm 067: 67mm 070: 70mm 080: 80mm 100: 100 mm 115: 115 mm
DD	**플랜지 유형** BB: 막힌 구멍 보어가 있는 중공축 CC: 클램핑 플랜지(컴팩트형) CF: 클램핑 플랜지(식품 및 음료용) CH: 클램핑 플랜지(중하중형) CL: 클램핑 플랜지 HI: 중공축(절연) HO: 중공축 HT: 중공축(특수 토크 지지대) RC: 원형 플랜지(36/40 클램핑 플랜지, 58은 6 mm 축 적용) RE: 원형 플랜지(확장 홀) RN: 원형 플랜지 SC: 스테이터 커플링 SF: 나사식 플랜지(53 클램핑 플랜지, 58 식품 및 음료용) SI: 서보 플랜지(증가된 축 하중 및 IP 보호) SQ: 스퀘어 플랜지 SR: 나사식 플랜지(36/40 클램핑 플랜지, 58 내식형) SY: 싱크로(증분형), 서보(36), 싱크로(58)(절대형) TM: 타코(115, 1mm 축, 58 모터 피드백) TS: 타코(10mm 축)
EE	**축/보어 직경** 06: 6mm 07: 7mm 08: 8mm 08: 8mm 10: 10mm 11: 11mm 12: 12mm 14: 14mm 15: 15 mm 06-72: 중공축/막힌 구멍 보어(6 ~ 72mm)
FFFFFF	**신호/분해능** Axxxxx: A Bxxxxx: AB Nxxxxx: ABN P16384: 프로그래밍 가능 xx: 싱글턴, 1 ~ 16비트 xx: 멀티턴, 0 ~ 43비트(싱글턴의 경우 00)
G	**갈바닉 절연(절대형에 한함)** 0: 제외 1: 있음
HH	**전원 공급(절대형에 한함)** 0: 10 ~ 32V DC/갈바닉 절연 1: 4.75 ~ 5.5V DC 2: 18 ~ 30V DC
J	**작동 원리** M: 자기식 O: 광학 방식 P: 광학 보간

제품 키워드

KK	**인터페이스** 01: RS485 07: SSI 2진 08: SSI Gray 35: CANopen 38: EtherCAT 48: PROFINET 58: EtherNet/IP
LL	**전기 연결** M08: 원형 커넥터 M8 M12: 원형 커넥터 M12 M16: 원형 커넥터 M16 M23: 원형 커넥터 M23 M12BC: 버스 커넥터
M	**케이블 출구** A: 액시얼 R: 레이디얼 T: 접선형
NN	**핀 개수** xx: 핀 개수
O	**차폐 연결(2m 케이블)(옵션)** C: 연결됨 N: 연결되지 않음
PPP	**케이블 길이** xxx: 케이블 길이(단위: dm)

참고

↳ 제공되는 모든 장치 유형 목록은 로이체의 웹 사이트 www.leuze.com을 참조하십시오.

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