기술 데이터 시트
엔코더 시리즈 정보
품목 번호: 91000280
EM-M 058 SY IO



그림과 차이가 날 수 있습니다

내용

- 기술 데이터
- 제품 키워드

시리즈	EM-M 058 SY
기본 원리	절대형
작동 원리	자기식
플랜지 직경	Ø 58mm
플랜지 유형	싱크로 플랜지
실축/중공축	실축
축 직경	Ø 10mm
	Ø 6mm
	Ø 8mm
공급전압	18 ~ 30V DC
출력 회로	M12A05
	M12R05
펄스 수	1 ... 16 Bit / 0 ... 43 Bit

기술 데이터

Encoder EM-M 058 SY IO

Mechanical Data

Flange	synchro flange
Flange material	aluminum
Housing material	stainless steel
Flange diameter	Ø 58 mm [Ø 2.283"]
Cam mounting	pitch 65 mm [2.4016 inches]

Shaft(s)

Shaft material	stainless steel
Starting torque	approx. 1 Ncm [1.416 in-ozf] at ambient temperature
Shaft	Ø 6 mm [Ø 0.236"]
Advice	Attention: No option IP = full IP67 version
Shaft length	L: 12 mm [0.472"]
Max. Permissible shaft loading radial	125 N [12.746 kp]
Max. Permissible shaft loading axial	120 N [12.236 kp]
Shaft	Ø 8 mm [Ø 0.315"]
Advice	Attention: No option IP = full IP67 version
Shaft length	L: 19 mm [0.748"]
Max. Permissible shaft loading radial	125 N [12.746 kp]
Max. Permissible shaft loading axial	120 N [12.236 kp]
Shaft	Ø 9.525 mm [Ø 3/8"] Order No: 4Z
Advice	Attention: No option IP = full IP67 version
Shaft length	L: 20 mm [0.787"]
Max. Permissible shaft loading radial	220 N [22.433 kp]
Max. Permissible shaft loading axial	120 N [12.236 kp]
Shaft	Ø 10 mm [Ø 0.394"]
Shaft length	L: 20 mm [0.787"]
Max. Permissible shaft loading radial	220 N [22.433 kp]
Max. Permissible shaft loading axial	120 N [12.236 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	8000 rpm

Machinery Directive: basic data safety integrity level

$MTTF_d$	1300 a
Mission time (TM)	20 a
Nominale service life (L10h)	1 x 10'11 revs. at 20 % rated shaft load and 8000 rpm
Diagnostic coverage (DC)	0 %

Electrical Data

Power supply/Current consumption	18 VDC up to 30 VDC: typ. 30 mA
Power consumption	max. 0.6 W
Operating principle	magnetic

Sensor data

Single-turn technology	innovative hall sensor technology
Single-turn resolution	65,536 steps/360° (16 bit)
Single-turn accuracy	± 0.0878° (≤ 12 bit)
Single-turn repeat accuracy	± 0.0878° (≤ 12 bit)
Internal cycle time	250 µs
Multi-turn technology	Wiegand wire technology no battery and no gear.
Multi-turn resolution	up to 32 bit with high precision value up to 43 bit.

Environmental data

ESD (DIN EN 61000-4-2):	4 kV
Burst (DIN EN 61000-4-4):	2 kV
Includes EMC:	DIN EN 61000-6-2 DIN EN 61326-2-3 DIN EN 61131-9
Vibration: (DIN EN 60068-2-6)	300 m/s^2 (10 Hz up to 2000 Hz)
Shock: (DIN EN 60068-2-27)	5000 m/s^2 (6 ms)
Electrial Safety:	DIN EN 61010-1 (VDE 0411-1) / IEC 61010-1 / UL 61010-1 / CSA C22.0 No. 61010-1-12
Turn on time:	<1 s

Duty information

Customs tariff number:	90318020
Country of origin:	Germany

Interface

Interface:	IO-Link Version: V1.1.4
Protocol:	• 2.8 Adjustable Switching Sensor, multi channel • 4.2.1 Measuring and Switching Sensor, high resolution, 1 channel • 4.2.2 Measuring and Switching Sensor, high resolution, 2 channel
Baud rate:	COM 3 230.4 kBit/s
Advice:	The standard settings and customer-specific adjustments in the parameterisation can be set using ISDUs, e.g. scaling, direction of rotation, etc.

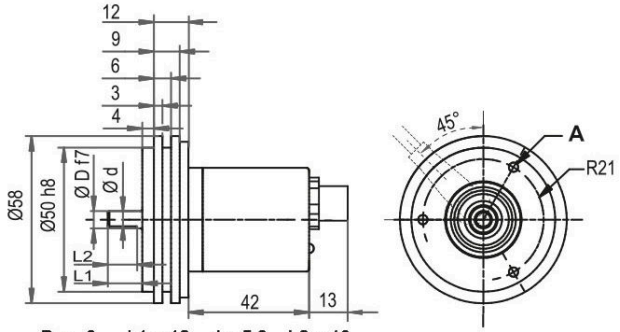
기술 데이터

Encoder EM-M 058 SY IO

General Data

Weight	approx. 224 g [7.901 oz]
Connections	connector outlet
Protection rating (EN 60529)	Housing: IP65, IP67; shaft sealed: IP65
Operating temperature	-40 °C up to +85 °C [-40 °F up to +185 °F]
Storage temperature	-40 °C up to +100 °C [-40 °F up to +212 °F]

Connector, M12x1 M12A05, axial, 5-pin



D = 6, L1 = 12, d = 5.3, L2 = 10
D = 8, L1 = 19, d = 7.5, L2 = 15
D = 10, L1 = 20, d = 9, L2 = 15
D = 3/8“, L1 = 20, d = 8.3, L2 = 10

Option AX:
D = 6, L1 = 10, d = 5.3, L2 = 8

A M4x0.7 - 6H

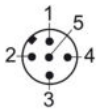
All dimensions in mm

IB5 → M12A05

Description

M12A05	axial, 5-pin, shield connected to encoder housing

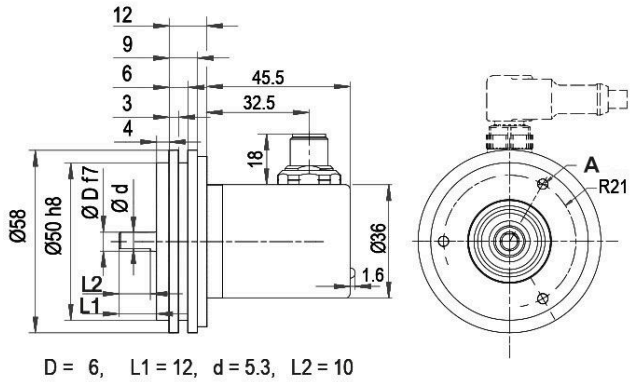
Assignments

	M12A05
	
(+) Vcc	1
GND	3
CANHigh	4
CANLow	2
CANGND shield	5

기술 데이터

Encoder EM-M 058 SY IO

Connector, M12x1 M12R05, radial, 5-pin



D = 6, L1 = 12, d = 5.3, L2 = 10
D = 8, L1 = 19, d = 7.5, L2 = 15
D = 10, L1 = 20, d = 9, L2 = 15
D = 3/8“, L1 = 20, d = 8.3, L2 = 10

Option AX:
D = 6, L1 = 10, d = 5.3, L2 = 8

A M4x0.7 - 6H

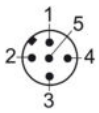
All dimensions in mm

IC5 → M12R05

Description

M12R05	radial, 5-pin, shield connected to encoder housing

Assignments

	M12R05
	
(+) Vcc	1
GND	3
CANHigh	4
CANLow	2
CANGND shield	5

기술 데이터

Encoder EM-M 058 SY IO

Options

Low-friction bearings	Order key
The encoder EM-M 058 SY IO 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

Shafts sealed to IP67, only with Ø 10 mm shaft		Order key
The encoder EM-M 058 SY IO can be supplied in a IP67 version.		IP
Max. rpm:	3500 min^{-1}	
Permitted Shaft-Loading:	axial 100 N; radial 110 N	
Starting-torque:	approx. 4 Ncm at ambient temperature	

Shaft length 10 mm (Ø 6 mm)	Order key
The encoder EM-M 058 SY IO shaft: Ø 6 mm is also available with a shortened shaft L = 10 mm.	AX

기술 데이터

Encoder EM-M 058 SY IO

Example Order No.	Type	Your encoder
EM50 058 SY	EM-M 058 SY	EM50 058 SY

	Shaft	Order key
06	Ø 6 mm [Ø 0.236"] Attention: No option IP = full IP67 version	06
	Ø 8 mm [Ø 0.315"] Attention: No option IP = full IP67 version	08
	Ø 9.525 mm [Ø 3/8"] Order No: 4Z Attention: No option IP = full IP67 version	4Z
	Ø 10 mm [Ø 0.394"]	10

	Single-turn Resolution	Order key
16	Single-turn resolution 1 bit up to 16 bit: (e. G. 6 bit)	16

	Multi-turn Resolution	Order key
43	Multi-turn resolution: (examples) 6 bit = 6 43 bit = 43	16

	Data protocol	Order key
42	IO-Link	42

	Power supply	Order key
2	18 V up to 30 V (standard)	2

	Galvanic isolation	Order key
0	no	0

	Electrical connections	Order key
	Connector:	
M12A05	sensor-connector, M12x1, 5-pin, axial, shield connected to encoder housing	M12A05
	sensor-connector, M12x1, 5-pin, radial, shield connected to encoder housing	M12R05

	Options	Order key
	Without option	Empty
	Low-friction bearings	LB
	Shafts sealed to IP67, only with Ø 10 mm shaft	IP
	Shaft length 10 mm (Ø 6 mm)	AX

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 06: SSI 2진 07: SSI Gray 08: 범용 이더넷 35: CANopen 38: EtherCAT 42: IO-Link 48: PROFINET 58: EtherNet/IP 68: CANopen lift 78: CAN SAE J1939
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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