Fiche technique

Informations sur la gamme de codeurs rotatifs

Art. n°: 91000280

EM-M 058 SY IO



Figure pouvant varier

Contenu

- Caractéristiques techniques
- Code d'article

Série	EM-M 058 SY
Principe de base	absolu
Principe de fonctionnement	magnétique
Diamètre de bride	Ø 58 mm
Type de bride	Bride synchro
Arbre plein/arbre creux	Arbre plein
Diamètre d'arbre	Ø 10 mm
	Ø 6 mm
	Ø 8 mm
Tension d'alimentation	18 ... 30 V CC
Commande de sortie	M12A05
	M12R05
Nombre d'impulsions	1 ... 16 Bit / 0 ... 43 Bit

Caractéristiques techniques

Leuze

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.

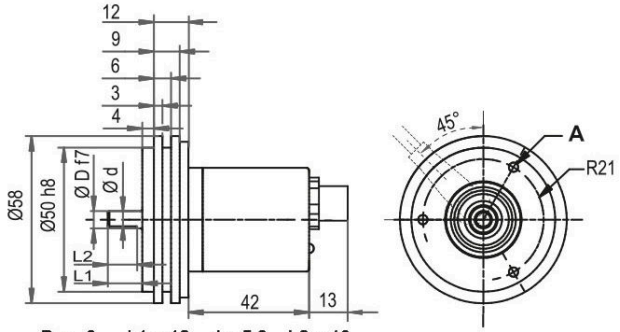
Caractéristiques techniques

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

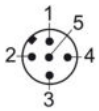
All dimensions in mm

IB5 → M12A05

Description

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

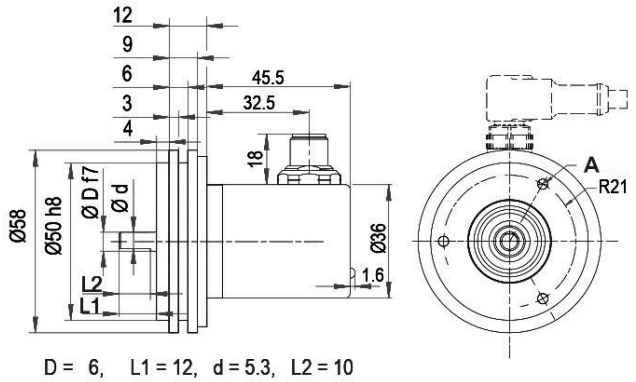
Assignments

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

Caractéristiques techniques

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

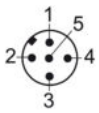
All dimensions in mm

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

Caractéristiques techniques

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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

Caractéristiques techniques

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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

Code d'article

Désignation d'article : **EABB CCCDDEE FFFFFF GHHJKK LLMNNOPPP RR**

A	**Type de codeur rotatif** I : Incrémental S : Absolu, mono-tour M : Absolu, multi-tour
BB	**Série** 10 : Entry 30 : Basic 50 : Extended 70 : Advanced
CCC	**Diamètre de bride** 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	**Type de bride** BB : Arbre creux avec alésage Sackloch CC : Bride de serrage (forme compacte) CF : Bride de serrage (aliments et boissons) CH : Bride de serrage (exécution pour charges lourdes) CL : Bride de serrage HI : Arbre creux (isolé) HO : Arbre creux HT : Arbre creux (supports de couple spéciaux) RC : Bride ronde (bride de serrage 36/40, 58 avec arbre de 6 mm) RE : Bride ronde (alésages étendus) RN : Bride ronde SC : Accouplement statorique SF : Bride à vis (bride de serrage 53, 58 Aliments et boissons) SI : Bride synchro (charge sur l'arbre étendue et protection IP) SQ : Bride carrée SR : Bride à vise (bride de serrage 36/40, 58 résistante à la corrosion) SY : Synchro (incrémental), Servo (36), Synchro (58) (absolu) TM : Tacho (115 avec arbre de 1 mm, rétroaction moteur 58) TS : Tacho (arbre de 10 mm)
EE	**Diamètre arbre/alésage** 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 : Alésage creux/Sackloch (6 ... 72 mm)
FFFFFF	**Signal/résolution** Axxxxx : A Bxxxxx : AB Nxxxxx : ABN P16384 : programmable xx : Mono-tour, 1 ... 16 bit xx : Multi-tour, 0 ... 43 bit (00 pour mono-tour)
G	**Isolation galvanique (absolu uniquement)** 0 : sans 1 : avec
HH	**Alimentation en tension (absolu uniquement)** 0 : 10 ... 32 V CC/avec isolation galvanique 1 : 4,75 ... 5,5 V CC 2 : 18 ... 30 V CC
J	**Principe de fonctionnement** M : magnétique O : Optique P : optiquement interpolé

Code d'article

KK	**Interface** 01 : RS485 06 : SSI binaire 07 : SSI Gray 08: Ethernet universel 35 : CANopen 38 : EtherCAT 42 : IO-Link 48 : PROFINET 58 : EtherNET/IP 68 : CANopen lift 78 : CAN SAE J1939
LL	**Raccordement électrique** M08 : Connecteur rond M8 M12 : Connecteur rond M12 M16 : Connecteur rond M16 M23 : Connecteur rond M23 M12BC : Connecteur boîtier réseau
M	**Sortie de câble** A : Axial R : Radial T : Tangentiel
NN	**Nombre de pôles** xx : Nombre de pôles
O	**Connexion blindage (câble 2 m) (en option)** C : raccordé N : non raccordé
PPP	**Longueur de câble** xxx : Longueur de câble (en dm)

Remarque

↳ Vous trouverez une liste de tous les types d'appareil disponibles sur le site Internet de Leuze à l'adresse www.leuze.com.

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