Technisches Datenblatt
Drehgeber Serieninformation
Art.-Nr.: 91000220
EM-M 058 SR SSI



Abbildung kann abweichen

Inhalt

- Technische Daten
- Artikelschlüssel

Serie	EM-M 058 SR
Grundprinzip	absolut
Funktionsprinzip	magnetisch
Flanschdurchmesser	Ø 58 mm
Flanschtyp	Klemmflansch
Vollwelle/Hohlwelle	Vollwelle
Wellendurchmesser	Ø 10 mm
Versorgungsspannung	4,75 ... 32 V DC
Ausgangsschaltung	M12A08S
	M12R08S
Impulszahl	1 ... 16 Bit / 0 ... 43 Bit

Technische Daten

Encoder EM-M 058 SR SSI

Mechanical Data

Flange	clamping flange
Flange material	Aluminum, anodized natur
Housing material	steel case chrome-plated, magnetic shielding
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 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

$MTTF_d$	1000 a
Mission time (TM)	20 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 32 VDC: typ. 50 mA
Power consumption	max. 0.5 W
Power supply/Current consumption	4,75 VDC up to 5,5 VDC: typ. 80 mA
Power consumption	max. 0.44 W
Operating principle	magnetic

Sensor data

Single-turn technology	innovative hall sensor technology
Single-turn resolution	up to 65,536 steps/360° (16 bit)
Single-turn accuracy	± 0.0878° (≤ 12 bit)
Single-turn repeat accuracy	± 0.0878° (≤ 12 bit)
Internal cycle time	≤ 600 µs
Multi-turn technology	Wiegand wire technology no battery and no gear.
Multi-turn resolution	up to 43 bit.

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 DIN EN 61326-1
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:	according DIN VDE 0160
Turn on time:	<1,5 s

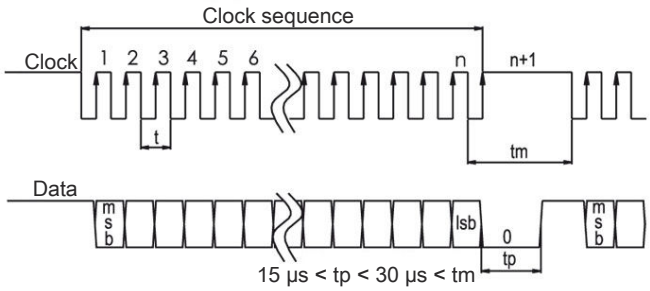
Duty information

Customs tariff number:	90318020
Country of origin:	Germany

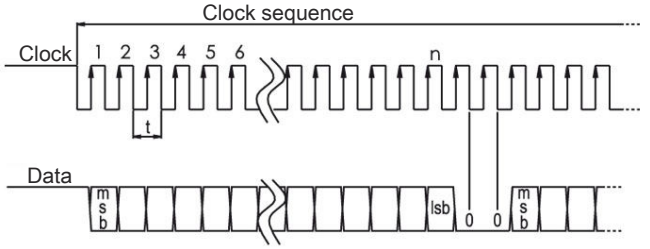
Interface

Interface:	SSI
Clock input:	via opto-coupler; I > 1.6 mA; U > 2.2 V
Clock frequency:	100 kHz up to 500 kHz, up to 2 MHz on request
Data output:	RS485/RS422 compatible
Output code:	gray or binary
SSI output:	Angular-/position value
Parity bit:	optional (even/odd)
Error bit:	optional
Turn on time:	<1,5 s
Configuration inputs Positive direction of counting: (View on shaft)	DIR = GND -> cw DIR = +UB -> ccw
Set to zero:	Set: Preset = +UB for 2 s Deaktivate: Preset = GND

Transmission protocoll SSI Single transmission:



Transmission protocol SSI Multipath transmission:



Technische Daten

Leuze

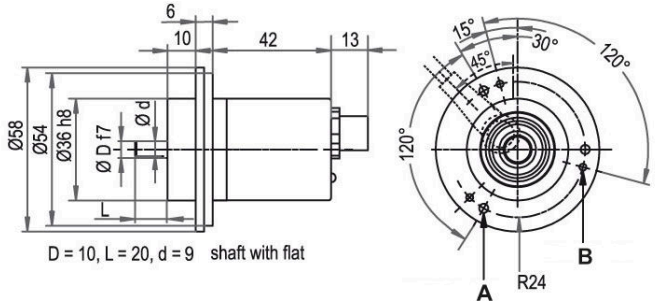
Encoder EM-M 058 SR SSI

LED-behaviour:	
At Start / while booting:	- red gleam (< 2,3 s)
Malfunction:	- constant red gleam (> 2,3 s)
Normal function:	- constant green gleam
No supply:	- no gleam

General Data

Weight	approx. 200 g [7.055 oz]
Connections	connector outlet
Protection rating (EN 60529)	IP67+IP69K all around
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 M12A08S, axial, 8-pin



A M4x0.7 - 6H
B M3x0.5 - 6H

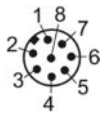
All dimensions in mm

CB8 → M12A08S

Description

M12A08S axial, 8-pin, shield connected to encoder housing

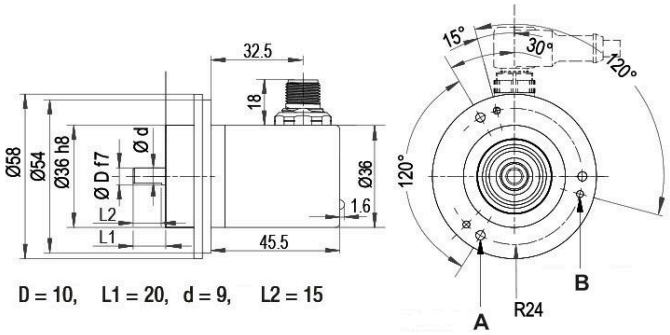
Assignments

	M12A08S
	
GND	1
(+) Vcc	2
SSI CLK+	3
SSI CLK-	4
SSI DATA+	5
SSI DATA-	6
PRESET	7
DIR	8
Shield	housing

Technische Daten

Encoder EM-M 058 SR SSI

Connector, M12x1 M12R08S, radial, 8-pin



A M4x0.7 - 6H
B M3x0.5 - 6H

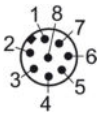
All dimensions in mm

CC8 → M12R08S

Description

M12R08S	radial, 8-pin, shield connected to encoder housing

Assignments

	M12R08S
	
GND	1
(+) Vcc	2
SSI CLK+	3
SSI CLK-	4
SSI DATA+	5
SSI DATA-	6
PRESET	7
DIR	8
Shield	housing

Technische Daten

Encoder EM-M 058 SR SSI

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

	Shaft	Order key
10	Ø 10 mm [Ø 0.394"]	10

	Single-turn Resolution	Order key
12	Single-turn resolution 1 bit up to 16 bit, recommended min. 6 bit (e. G. 12 bit)	12

	Multi-turn Resolution	Order key
12	Multi-turn up to 43 bit (e. G. 12 bit) No Multi-turn = 00	12

	Data protocol	Order key
06	SSI binary	06
	SSI gray 07	

	Power supply	Order key
0	4.75 V up to 32 V (standard)	0
	4.75 V up to 5.5 V	1

	Galvanic isolation	Order key
1	yes	1

	Electrical connections	Order key
	Connector:	
M12A08S	sensor-connector, M12x1, 8-pin, axial, shield connected to encoder housing	M12A08S
	sensor-connector, M12x1, 8-pin, radial, shield connected to encoder housing	M12R08S

Artikelschlüssel

Artikelbezeichnung: **EABB CCCDDEE FFFFFF GHHJKK LLMNNOPPP RR**

A	**Drehgebertyp** I: Inkremental S: Absolut, Singleturn M: Absolut, Multiturn
BB	**Serie** 10: Entry 30: Basic 50: Extended 70: Advanced
CCC	**Flanschdurchmesser** 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	**Flanschtyp** BB: Hohlwelle mit Sacklochbohrung CA: Klemmflansch (zusätzlich 1,25") CC: Klemmflansch (kompakte Bauform) CF: Klemmflansch (Lebensmittel und Getränke) CH: Klemmflansch (Schwerlastausführung) CL: Klemmflansch HI: Hohlwelle (isoliert) HO: Hohlwelle HT: Hohlwelle (spezielle Drehmomentstütze) RC: Rundflansch (36/40 Klemmflansch, 58 mit 6-mm-Welle) RE: Rundflansch (erweiterte Bohrungen) RN: Rundflansch SC: Statorkupplung SF: Schraubflansch (53 Klemmflansch, 58 Lebensmittel und Getränke) SI: Servoflansch (erweiterte Wellenbelastung und IP-Schutz) SQ: Quadratflansch SR: Schraubflansch (36/40 Klemmflansch, 58 korrosionsbeständig) SY: Synchro (inkremental), Servo (36), Synchro (58) (absolut) TM: Tacho (115 mit 1-mm-Welle, 58 Motorfeedback) TS: Tacho (10-mm-Welle)
EE	**Wellen-/Bohrungsdurchmesser** 06: 6 mm 07: 7 mm 08: 8 mm 08: 8 mm 10": 1/10-Konus, 9,25 mm (3/8") 10: 10 mm 11: 11 mm 12: 12 mm 14: 14 mm 15: 15 mm 06-72: Hohl-/Sacklochbohrung (6 ... 72 mm) 2Z: 6,35 mm (1/4") 4Z: 9,525 mm (3/8")
FFFFFF	**Signal/Auflösung** Axxxxx: A Bxxxxx: AB Nxxxxx: ABN P16384: Programmierbar xx: Singleturn, 1 ... 16 Bit xx: Multiturn, 0 ... 43 Bit (00 bei Singleturn)
G	**Galvanische Trennung (nur Absolut)** 0: ohne 1: mit
HH	**Spannungsversorgung (nur Absolut)** 0": 4,75 ... 32 V DC 0: 10 ... 32 V DC/mit galvanischer Trennung 1: 4,75 ... 5,5 V DC 2: 18 ... 30 V DC
J	**Funktionsprinzip** M: magnetisch O: optisch P: optisch interpoliert

Artikelschlüssel

KK	**Schnittstelle** 01: RS485 06: SSI binär 07: SSI Gray 08: Ethernet universal 35: CANopen 38: EtherCAT 42: IO-Link 48: PROFINET 58: EtherNet/IP 68: CANopen lift 78: CAN SAE J1939
LL	**Elektrischer Anschluss** M08: Rundstecker M8 M12: Rundstecker M12 M16: Rundstecker M16 M23: Rundstecker M23 M12BC: Bushaubenstecker
M	**Kabelabgang** A: Axial R: Radial T: Tangential
NN	**Polzahl** xx: Polzahl
O	**Schirmanschluss (2-m-Kabel) (optional)** C: angeschlossen N: nicht angeschlossen
PPP	**Kabellänge** xxx: Kabellänge (in dm)

Hinweis

↳ Eine Liste mit allen verfügbaren Gerätetypen finden Sie auf der Webseite von Leuze unter www.leuze.com.

Leuze