

Code ST05	Project E12-A	Release C	TECHNICAL DATASHEET
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ABSOLUTE OPTICAL ENCODER AEN58SC (Serial)

GENERAL FEATURES

- Absolute optical encoder (singleturn or multiturn).
- Output protocol: **SSI-BISS**.
- Aluminium flange and housing.
- Radial or axial output with connector M23 12 Pin or M12 8 Pin.



MECHANICAL AND ELECTRICAL CHARACTERISTICS

MECHANICAL • Elastic flange. • Aluminium housing. • Stainless steel shaft. • Ball bearings with special high-sealed screens. • High protection even in harsh environmental conditions. ELECTRICAL • Input (direction). • Option: 1 Vpp analog signal.	Cod. AEN58SC	
	Resolution	360 / 720 cpr 10-17 Bit Singleturn 12 Bit Multiturn
	Max. rotating speed	momentary 12000 rpm continuous 10000 rpm
	Fixing	with elastic flange
	Max. shaft load	40 N (axial) - 60 N (radial)
	Shaft diameter (mm)	Ø 9.52 - Ø 10 - Ø 12
	Operating temperature	0 °C ÷ 70 °C others on request
	Storage temperature	-25 °C ÷ 85 °C
	Vibration resistance (EN 60068-2-6)	100 m/s ² (10 ÷ 2000 Hz)
	Shock resistance (EN 60068-2-27)	1000 m/s ² (6 ms)
	Protection class (EN 60529)	IP 64
	Torque	≤ 0.01 Nm
	Moment of inertia	3.8 x 10 ⁻⁶ kgm ²
	Power supply	10 ÷ 30 V or 5 V ± 10%
	Current consumption	100 mA (ST), 150 mA (MT), 250 mA (SP)
	Protocol	BiSS, SSI (with or without SinCos 1 Vpp)
	Output code	Binary, Gray
	Electrical connections	see related table
	Weight	260 g (ST), 310 g (MT)

ORDERING CODE

MODEL	TYPE / OUTPUT	RESOL. Bit (MT)	RESOL. Bit (ST)	POWER SUPPLY	Ø SHAFT	CONNECTOR	SIGNAL	CONNECTION	OPTIONS
AEN58SC	M R	12	12	1030	D10	CG	SG	11	

S = singleturn M = multiturn R = radial A = axial	00 = if ST 12 = 12 Bit	10 = 10 Bit * 12 = 12 Bit 13 = 13 Bit 14 = 14 Bit 17 = 17 Bit 0360 = 360 increment ST * 0720 = 720 increment ST *	1030 = 10÷30 V 05V = 5 V **	952 = ø 9.52 mm D10 = ø 10 mm D12 = ø 12 mm	CG = M23 12 Pin CT = M12 8 Pin **	BE = BiSS BV = BiSS+1Vpp SB = SSI Binary SG = SSI Gray SC = SSI Gray+1Vpp SP = SSI program. SR = SSI Binary+ Preset active high SH = SSI Gray+ Preset active high	n = connection number	No cod. = standard
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* Only singleturn version
** Not available for SP version

Example  **ABSOLUTE OPTICAL ENCODER AEN58SC MR 1212 1030 D10 CG SG 11**

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ELECTRICAL CONNECTIONS

Encoder supplied with M23 (12 Pin) connector

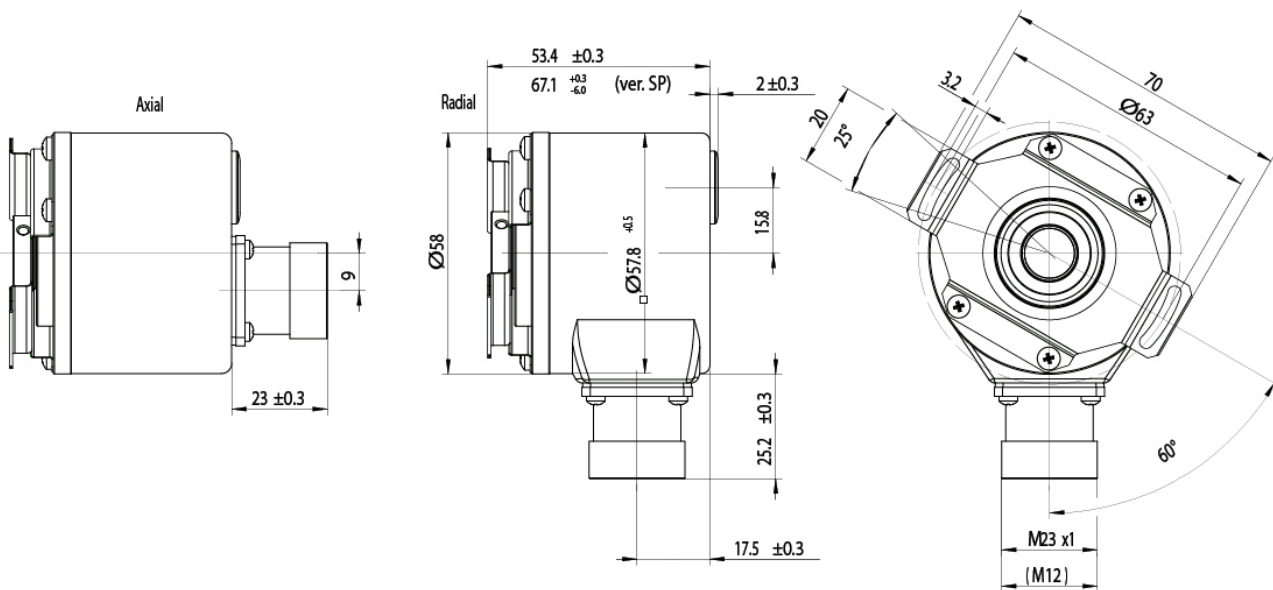
CONNECTION				
N. Pin	Signals (BE, SB, SG)	Signals (SC, BV)	Signals (SP)	Signals (SR, SH)
1	0 V (supply voltage)	0 V (supply voltage)	Clock	0 V (supply voltage)
2	Data	Data	Clock	Data
3	Clock	Clock	Data	Clock
4	n.c.	A	Data	n.c.
5	Direction *	Direction *	RS 232 TxD	Direction **
6	n.c.	B	RS 232 RxD	n.c.
7	n.c.	A	0 V (signal output)	n.c.
8	+ V	+ V	Direction	+ V
9	n.c.	B	Preset 1	n.c.
10	Data	Data	Preset 2	Data
11	Clock	Clock	+ V	Clock
12	0 V (signal output)	0 V (signal output)	0 V (supply voltage)	Preset **

* Not connected = ascending code values with clockwise rotation
 Connected to 0 V = descending code values with clockwise rotation
 ** Preset and Direction active with signal high

Encoder supplied with M12 (8 Pin) connector

CONNECTION	
N. Pin	Signals (BE, SB, SG)
1	+ V
2	0 V
3	n.c.
4	Clock
5	Data
6	Clock
7	Direction *
8	Data

DIMENSIONS



WHAT TO AVOID

- Any mechanical working (cutting, drilling, milling, etc.).
- Any modification of the encoder body or shaft.
- Any improper use, not complying with the technical instructions provided by the Manufacturer.
- External shocks or stresses.

