

Code <b>ST05</b>	Project <b>E12-A</b>	Release <b>B</b>	<b>TECHNICAL DATASHEET</b>
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## ABSOLUTE OPTICAL ENCODER AEN58SC (Serial)

### GENERAL FEATURES

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



### MECHANICAL AND ELECTRICAL CHARACTERISTICS

<b>MECHANICAL</b> <ul style="list-style-type: none"> <li>• Elastic flange.</li> <li>• Aluminium housing.</li> <li>• Stainless steel shaft.</li> <li>• Ball bearings with special high-sealed screens.</li> <li>• High protection even in harsh environmental conditions.</li> </ul> <b>ELECTRICAL</b> <ul style="list-style-type: none"> <li>• Diagnostic LED.</li> <li>• Input (direction).</li> <li>• Output data: status, preset.</li> </ul>	<b>Cod. AEN58SC</b>	
	Resolution	10-17 Bit Singleturn    12 Bit Multiturn
Max. rotating speed	continuous    10000 rpm momentary    12000 rpm	
Max. shaft load	40 N (axial) - 60 N (radial)	
Shaft diameter (mm)	Ø 9.52 - Ø 10 - Ø 12	
Operating temperature	-40 °C ÷ 100 °C	
Storage temperature	-25 °C ÷ 85 °C (due to packaging)	
Vibration resistance (EN 60068-2-6)	100 m/s <sup>2</sup> (10 ÷ 2000 Hz)	
Shock resistance (EN 60068-2-27)	1000 m/s <sup>2</sup> (6 ms)	
Protection class (EN 60529)	IP 64	
Torque	≤ 0.01 Nm	
Moment of inertia	3.8 x 10 <sup>-6</sup> kgm <sup>2</sup>	
Power supply	10 ÷ 30 V or 5 V ± 10%	
Current consumption	100 mA (ST), 150 mA (MT), 250 mA (SP)	
Protocol	BiSS-C, 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
<b>AEN58SC</b>	<b>MR</b>	<b>12</b>	<b>12</b>	<b>1030</b>	<b>D10</b>	<b>CG</b>	<b>SG</b>	<b>11</b>	

**S** = singleturn    **00** = if ST    **10** = 10 Bit \*    **1030** = 10:30 V    **952** = ø 9.52 mm    **CG** = M23 12 Pin    **BE** = BiSS-C    **n** = connection number    **No cod.** = standard  
**M** = multiturn    **12** = 12 Bit    **12** = 12 Bit    **05V** = 5 V \*\*    **D10** = ø 10 mm    **CT** = M12 8 Pin \*\*    **BV** = BiSS-C+1Vpp  
**R** = radial    **13** = 13 Bit    **13** = 13 Bit    **D12** = ø 12 mm    **SB** = SSI Binary  
**A** = axial    **14** = 14 Bit    **14** = 14 Bit    **SC** = SSI Gray+1Vpp  
                   **17** = 17 Bit    **17** = 17 Bit    **SP** = SSI program.  
                   **0360** = 360    **0360** = 360    **SR** = SSI Binary+  
                   increment ST \*    increment ST \*    Preset active high  
                   **0720** = 720    **0720** = 720    **SH** = SSI Gray+  
                   increment ST \*    increment ST \*    Preset active high

\* 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

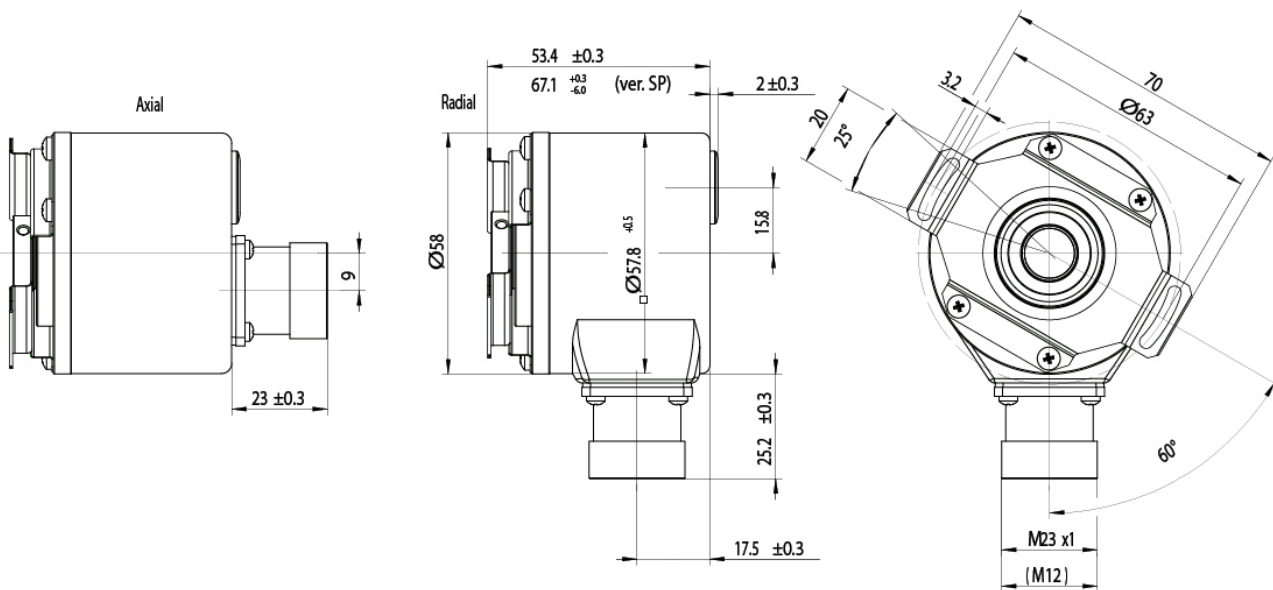
CONNECTION				
N. Pin	Signals (BE, SB, SG)	Signals (SC, BV)	Signals (SP)	Signals (SR, SH)
1	0 V (supply voltage)	0 V (supply voltage)	Clock	0 V (supply voltage)
2	Data	Data	Clock	Data
3	Clock	Clock	Data	Clock
4	n.c.	A	Data	n.c.
5	Direction *	Direction *	RS 232 TxD	Direction **
6	n.c.	B	RS 232 RxD	n.c.
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)	Sense	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.

