

Code <b>ST05</b>	Project <b>E07-A</b>	Release <b>C</b>	<b>TECHNICAL DATASHEET</b>
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## ABSOLUTE OPTICAL ENCODER AEN600 (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

<b>MECHANICAL</b> <ul style="list-style-type: none"> <li>• Round flange, with centering <math>\varnothing 31.75</math> mm.</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>• Input (direction).</li> <li>• Option: 1 Vpp analog signal.</li> </ul>	<b>Cod. AEN600</b>	
	<b>Resolution</b>	360 / 720 cpr      10-17 Bit Singleturn 12 Bit Multiturn
	<b>Max. rotating speed</b>	momentary      12000 rpm continuous      10000 rpm
	<b>Centering (mm)</b>	$\varnothing 31.75$
	<b>Max. shaft load</b>	40 N (axial) - 60 N (radial)
	<b>Shaft diameter (mm)</b>	$\varnothing 9.52 - \varnothing 10$
	<b>Operating temperature</b>	0 °C ÷ 70 °C    others on request
	<b>Storage temperature</b>	-25 °C ÷ 85 °C
	<b>Vibration resistance (EN 60068-2-6)</b>	100 m/s <sup>2</sup> (10 ÷ 2000 Hz)
	<b>Shock resistance (EN 60068-2-27)</b>	1000 m/s <sup>2</sup> (6 ms)
	<b>Protection class (EN 60529)</b>	IP 64 standard    IP 67 optional
	<b>Torque</b>	≤ 0.01 Nm
	<b>Moment of inertia</b>	3.8 x 10 <sup>-6</sup> kgm <sup>2</sup>
	<b>Power supply</b>	10 ÷ 30 V or 5 V ± 10%
	<b>Current consumption</b>	100 mA (ST), 150 mA (MT), 250 mA (SP)
	<b>Protocol</b>	BiSS, SSI (with or without SinCos 1 Vpp)
	<b>Output code</b>	Binary, Gray
	<b>Electrical connections</b>	see related table
<b>Weight</b>	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>AEN600</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>	<b>V2</b>

**S** = singleturn    **00** = if ST    **10** = 10 Bit \*    **1030** = 10÷30 V    **952** =  $\varnothing 9.52$  mm    **CG** = M23 12 Pin    **BE** = BiSS    **n** = connection number    **No cod.** = standard  
**M** = multiturn    **12** = 12 Bit    **12** = 12 Bit    **05V** = 5 V \*\*    **D10** =  $\varnothing 10$  mm    **CT** = M12 8 Pin \*\*    **BV** = BiSS+1Vpp    **V2** = IP 67  
**R** = radial        **13** = 13 Bit    **13** = 13 Bit    **SB** = SSI Binary  
**A** = axial         **14** = 14 Bit    **14** = 14 Bit    **SG** = SSI Gray  
                         **17** = 17 Bit    **17** = 17 Bit    **SC** = SSI Gray+1Vpp  
                         **0360** = 360    **SP** = SSI program.  
                         increment ST \*    **SR** = SSI Binary+  
                         **0720** = 720    Preset active high  
                         increment ST \*    Preset active high  
                         **SH** = SSI Gray+  
                         Preset active high

\* Only singleturn version

\*\* Available only for shaft  $\varnothing 10$  mm, IP 64, with BE, SB and SG signals

**Example**  **ABSOLUTE OPTICAL ENCODER AEN600 MR 1212 1030 D10 CG SG 11 V2**

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### ELECTRICAL CONNECTIONS

Encoder supplied with M23 (12 Pin) connector

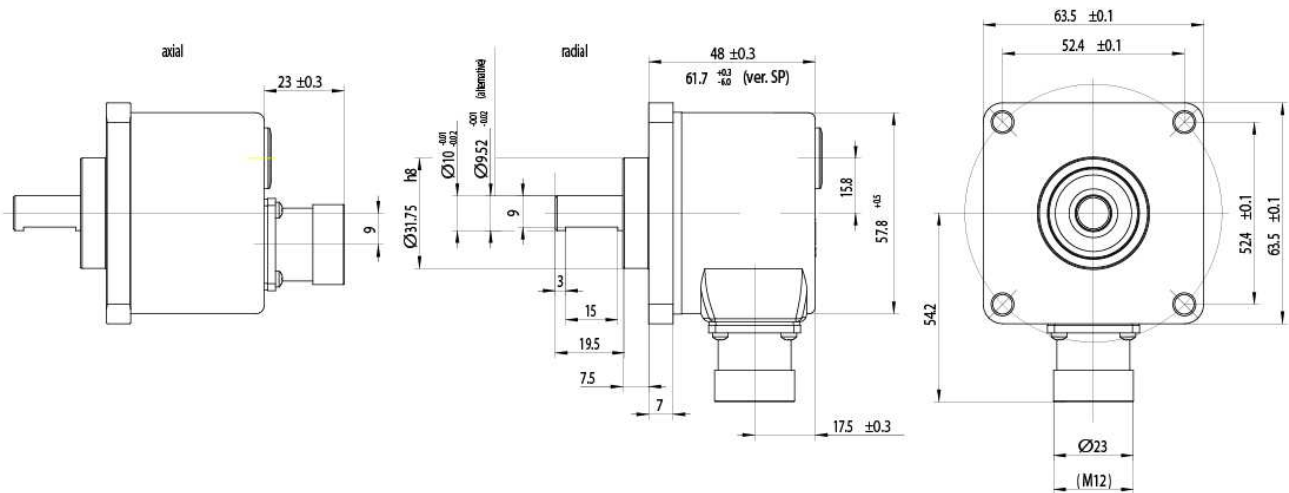
CONNECTION				
N. Pin	Signals (BE, SB, SG)	Signals (SC, BV)	Signals (SP)	Signals (SR, SH)
1	0 V (supply voltage)	0 V (supply voltage)	Clock	0 V (supply voltage)
2	Data	Data	Clock	Data
3	Clock	Clock	Data	Clock
4	n.c.	A	Data	n.c.
5	Direction *	Direction *	RS 232 TxD	Direction **
6	n.c.	B	RS 232 RxD	n.c.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

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

\* 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

### 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.

