

Code ST05	Project E07-A	Release C	TECHNICAL DATASHEET
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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

MECHANICAL

- Round flange, with centering $\varnothing 31.75$ mm.
- 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. AEN600

Resolution	360 / 720 cpr	10-17 Bit Singleturn 12 Bit Multiturn
Max. rotating speed	momentary	12000 rpm
	continuous	10000 rpm
Centering (mm)	$\varnothing 31.75$	
Max. shaft load	40 N (axial) - 60 N (radial)	
Shaft diameter (mm)	$\varnothing 9.52 - \varnothing 10$	
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 standard	IP 67 optional
Torque	≤ 0.01 Nm	
Moment of inertia	3.8 × 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
AEN600	MR	12	12	1030	D10	CG	SG	11	V2

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 = $\varnothing 9.52$ mm D10 = $\varnothing 10$ 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 V2 = IP 67
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* 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

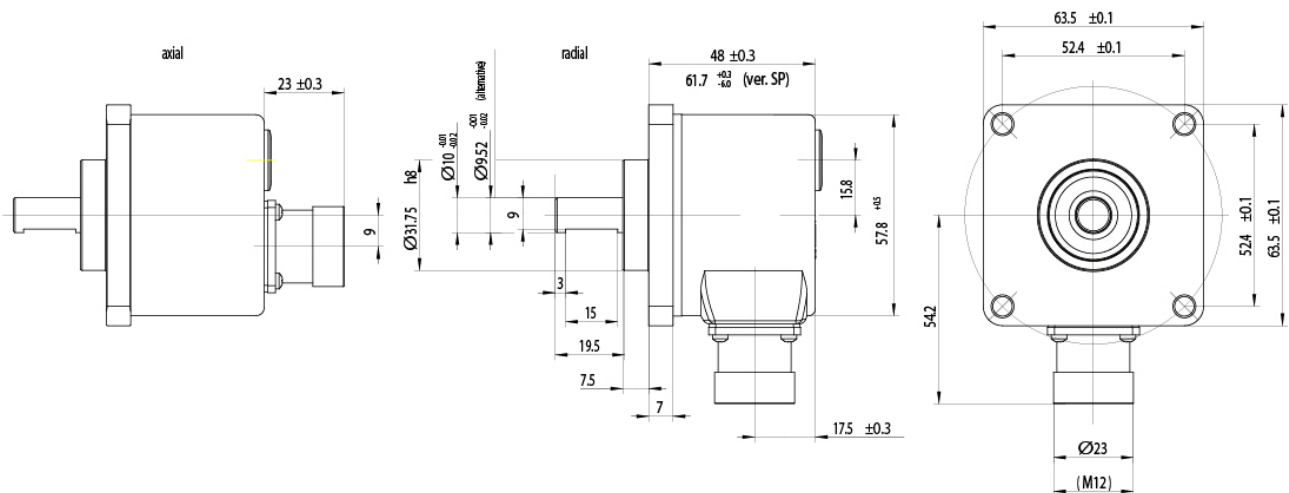
CONNECTION				
N. Pin	Signals (BE, SB, SG)	Signals (SC, BV)	Signals (SP)	Signals (SR, SH)
1	0 V (supply voltage)	0 V (supply voltage)	Clock	0 V (supply voltage)
2	Data	Data	Clock	Data
3	Clock	Clock	Data	Clock
4	n.c.	A	Data	n.c.
5	Direction *	Direction *	RS 232 TxD	Direction **
6	n.c.	B	RS 232 RxD	n.c.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

