

Code ST05	Project E06-A	Release A	TECHNICAL DATASHEET
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ABSOLUTE OPTICAL ENCODER AEN500 (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	Cod. AEN500	
<ul style="list-style-type: none"> • Round flange, with centering \varnothing 50 mm. • Aluminium housing. • Stainless steel shaft. • Ball bearings with special high-sealed screens. • High protection even in harsh environmental conditions. 	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)	\varnothing 6
	Operating temperature	-40 °C ÷ 100 °C
	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 Ncm
	Moment of inertia	3.8 x 10 ⁻⁶ kgm ²
	Power supply	10 ÷ 30 V ± 10% or 5 V ± 10%
	Current consumption	50 mA (SG), 100 mA (MG)
	Protocol	BiSS, SSI (with or without SinCos 1 Vpp)
	Output code	Binary, Gray
	Electrical connections	see related table
	Weight	260 g (SG), 310 g (MG)
ELECTRICAL		
<ul style="list-style-type: none"> • Diagnostic LED. • Input (direction). • Output data: status, preset. 		

ORDERING CODE

MODEL	TYPE / OUTPUT	RESOL. Bit (MG)	RESOL. Bit (SG)	POWER SUPPLY	Ø SHAFT	CONNECTOR	SIGNAL	CONNECTION	OPTIONS
AEN500	M R	12	12	1030	D06	CG	SG	11	V2

S = singleturn **00** = if SG **10** = 10 Bit **1030** = 10÷30 V **D06** = \varnothing 6 mm **CG** = M23 12 Pin **BI** = BiSS **n** = connection number **No cod.** = standard
M = multiturn **12** = 12 Bit **12** = 12 Bit **05V** = 5 V **CT** = M12 8 Pin **BC** = BiSS+1 Vpp **V2** = IP 67
R = radial **13** = 13 Bit **14** = 14 Bit **17** = 17 Bit **SG** = SSI Binary **SB** = SSI Binary
A = axial **14** = 14 Bit **17** = 17 Bit **SG** = SSI Gray **SC** = SSI+1 Vpp
0360 = 360 increment SG
0720 = 720 increment SG

Example  **ABSOLUTE OPTICAL ENCODER AEN500 MR 1212 1030 D06 CG SG 11 V2**

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CABLE AND ELECTRICAL CONNECTIONS

Encoder supplied with M23 (12 Pin) connector

CONNECTION (BI, SB, SG)		
Color	N. Pin	Signals
Brown	1	0 V
Pink	2	Data
Yellow	3	Clock
	4	n.c.
Blue	5	Direction *
Red	6	n.c.
Violet	7	n.c.
White	8	+ V
	9	n.c.
Grey	10	Data
Green	11	Clock
Black	12	0 V

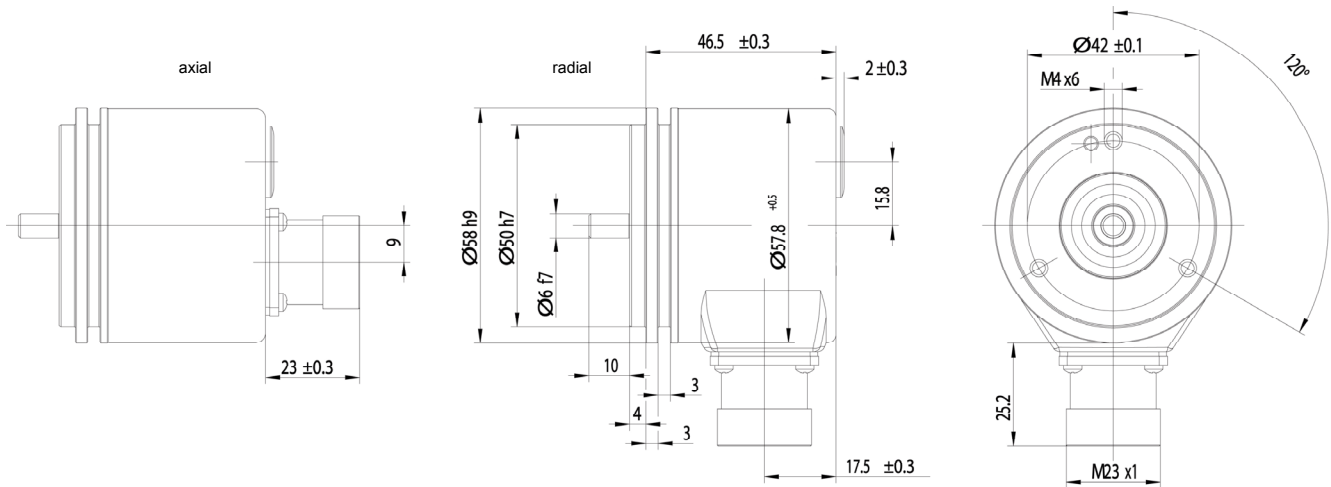
CONNECTION (SC, BC)		
Color	N. Pin	Signals
Brown	1	0 V
Pink	2	Data
Yellow	3	Clock
White/Green	4	A
Blue	5	Direction *
Red/Blue	6	B
Brown/Green	7	A
White	8	+ V
Grey/Pink	9	B
Grey	10	Data
Green	11	Clock
Black	12	Sense

Encoder supplied with M12 (8 Pin) connector

CONNECTION (BI, SB, SG)		
Color	N. Pin	Signals
White	1	+ V
Brown	2	0 V
	3	n.c.
Green	4	Clock
Pink	5	Data
Yellow	6	Clock
Blue	7	Direction *
Grey	8	Data

* Not connected = ascending code values with clockwise rotation
 Connected to 0 V = descending code values with clockwise rotation

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.

