

Code ST06	Project E06-A	Release A	TECHNICAL DATASHEET
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ABSOLUTE OPTICAL ENCODER AEN500 (Parallel)

GENERAL FEATURES

- Absolute optical encoder (singleturn or multiturn).
- Output protocol: **Parallel (Gray or Binary)**.
- Aluminium flange and housing.
- Axial or radial output with connector or sealed cable exit.



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	10-14 Bit Singleturn 4-8-12 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	-40 °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 \pm 10%
	Current consumption	200 mA (SG), 300 mA (MG)
	Protocol	Parallel
	Output code	Binary, Gray
	Electrical connections	see related table
	Weight	350 g (SG), 400 g (MG)

ORDERING CODE

MODEL	TYPE / OUTPUT	RESOL. Bit (MG)	RESOL. Bit (SG)	POWER SUPPLY	\varnothing SHAFT	CABLE / CONNECTOR	SIGNAL	CONNECTION	OPTIONS
AEN500	M R	08	12 *	1030	D06	M01	PB	C	V2

S = singleturn **00** = if SG **10** = 10 Bit **1030** = 10+30 V **D06** = \varnothing 6 mm **Mnn** = cable length in m **PB** = Parallel Binary **C** = cable **No cod.** = standard
M = multiturn **04** = 4 Bit **12** = 12 Bit **13** = 13 Bit **CQ** = M23 17 Pin **PG** = Parallel Gray **n** = connection number **V2** = IP 67
R = radial **08** = 8 Bit **13** = 13 Bit **14** = 14 Bit
A = axial **12** = 12 Bit
0360 = 360 incrementi SG
0720 = 720 incrementi SG

* If the encoder is Multiturn, the possible resolution SG can be only 12 Bit.

Example  **ABSOLUTE OPTICAL ENCODER AEN500 MR 0812 1030 D06 M01 PB C V2**

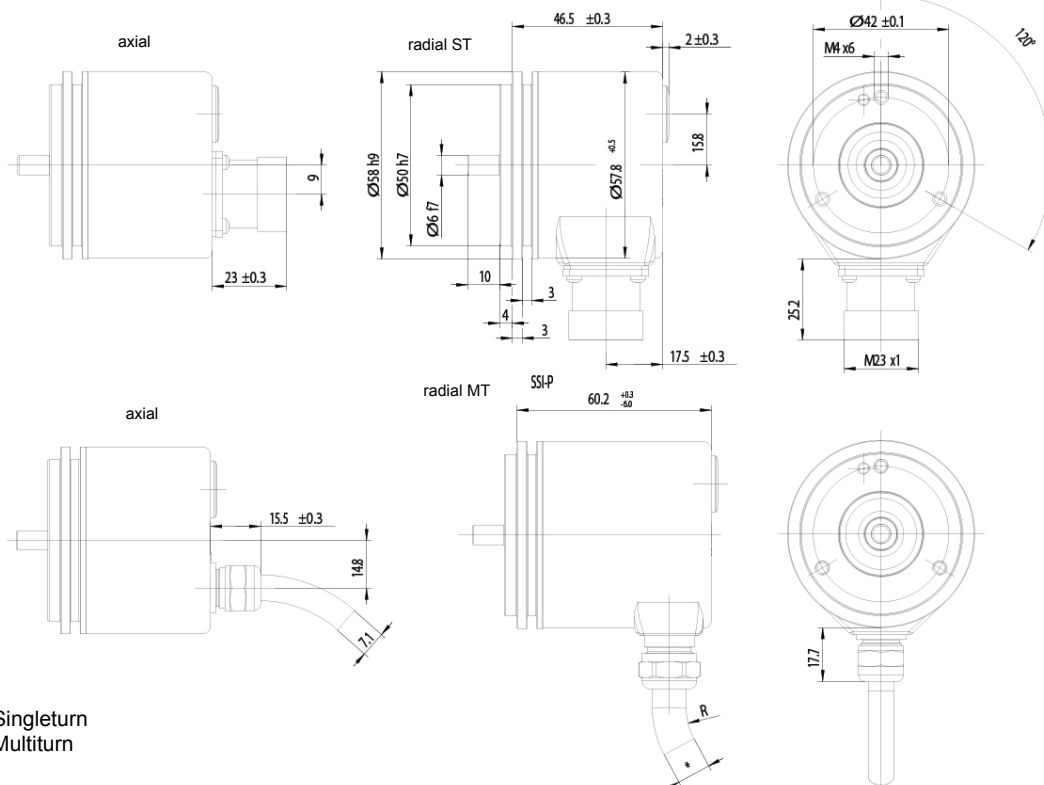
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CABLE AND ELECTRICAL CONNECTIONS


SINGLETURN, CABLE OUTPUT					
Color	9 Bit / 360 inc.	10 Bit / 720 inc.	12 Bit	13 Bit	14 Bit
Grey/Pink	n.c.	n.c.	n.c.	n.c.	S0 (LSB)
Brown/Yellow	n.c.	n.c.	n.c.	S0 (LSB)	S1
Brown/Grey	n.c.	n.c.	S0 (LSB)	S1	S2
Red/Blue	n.c.	n.c.	S1	S2	S3
Violet	n.c.	S0 (LSB)	S2	S3	S4
White/Brown	S0 (LSB)	S1	S3	S4	S5
White/Green	S1	S2	S4	S5	S6
White/Yellow	S2	S3	S5	S6	S7
White/Grey	S3	S4	S6	S7	S8
White/Pink	S4	S5	S7	S8	S9
White/Blue	S5	S6	S8	S9	S10
White/Red	S6	S7	S9	S10	S11
White/Black	S7	S8	S10	S11	S12
Brown/Green	S8 (MSB)	S9 (MSB)	S11 (MSB)	S12 (MSB)	S13 (MSB)
Yellow	Tristate S0 + S8	Tristate S0 + S9	Tristate S0 + S11	Tristate S0 + S12	Tristate S0 + S13
Pink	Latch	Latch	Latch	Latch	Latch
Green	Direction	Direction	Direction	Direction	Direction
Black	0 V	0 V	0 V	0 V	0 V
Red	+ V	+ V	+ V	+ V	+ V
Brown	Alarm	Alarm	Alarm	Alarm	Alarm

SINGLETURN, CONNECTOR M23 (17 Pin)					
Pin	9 Bit / 360 inc.	10 Bit / 720 inc.	12 Bit	13 Bit	14 Bit
1	S0 (LSB)	S0 (LSB)	S0 (LSB)	S12 (MSB)	S13 (MSB)
2	S1	S1	S1	S11	S12
3	S2	S2	S2	S10	S11
4	S3	S3	S3	S9	S10
5	S4	S4	S4	S8	S9
6	S5	S5	S5	S7	S8
7	S6	S6	S6	S6	S7
8	S7	S7	S7	S5	S6
9	S8 (MSB)	S8	S8	S4	S5
10	n.c.	S9 (MSB)	S9	S3	S4
11	n.c.	n.c.	S10	S2	S3
12	Tristate S0 + S8	Tristate S0 + S9	S11 (MSB)	S1	S2
13	Latch	Latch	Latch	S0 (LSB)	S1
14	Direction	Direction	Direction	Direction	S0 (LSB)
15	0 V	0 V	0 V	0 V	0 V
16	+ V	+ V	+ V	+ V	+ V
17	Alarm	Alarm	Alarm	Alarm / Latch	Alarm / Latch

DIMENSIONS



ST = Singleturn
MT = Multiturn

WHAT TO AVOID <ul style="list-style-type: none"> 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. 	
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