GIVI MISURE
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Code	Project	Release	
ST06	***E04-A***	***A***	***TECHNICAL DATASHEET***

ABSOLUTE OPTICAL ENCODER AEN536 (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

- Round flange, with centering Ø 36 mm.
- Aluminium housing.
- Stainless steel shaft.
- Ball bearings with special high-sealed screens.
- High protection even in harsh environmental conditions.

ELECTRICAL

- Diagnostic LED.
- Input (direction).
- Output data: status, preset.

Cod. AEN536	
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)	Ø 9.52 – Ø 10
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 ± 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	Ø SHAFT	CABLE / CONNECTOR	SIGNAL	CONNECTION	OPTIONS
AEN536	**M R**	**08**	**12 ***	**1030**	**D10**	**M01**	**PB**	**C**	**V2**
	S = singleturn **M** = multiturn **R** = radial **A** = axial	**00** = if SG **04** = 4 Bit **08** = 8 Bit **12** = 12 Bit	**10** = 10 Bit **12** = 12 Bit **13** = 13 Bit **14** = 14 Bit **0360** = 360 increment SG **0720** = 720 increment SG	**1030** = 10÷30 V	**952** = ø9.52 mm **D10**= ø10 mm	**Mnn** = cable length in m **CQ** = M23 17 Pin	**PB** = Parallel Binary **PG** = Parallel Gray	**C** = cable **n** = connection number	**No cod.** = standard **V2** = IP 67

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

Example ☞ **ABSOLUTE OPTICAL ENCODER AEN536 MR 0812 1030 D10 M01 PB C V2**

GIVI MISURE S.R.L. A SOCIO UNICO
C.F. e Iscrizione al Reg. Imprese di Monza e Brianza n° 04355540156 - Cap. Soc. € 51.480,00 I.V.

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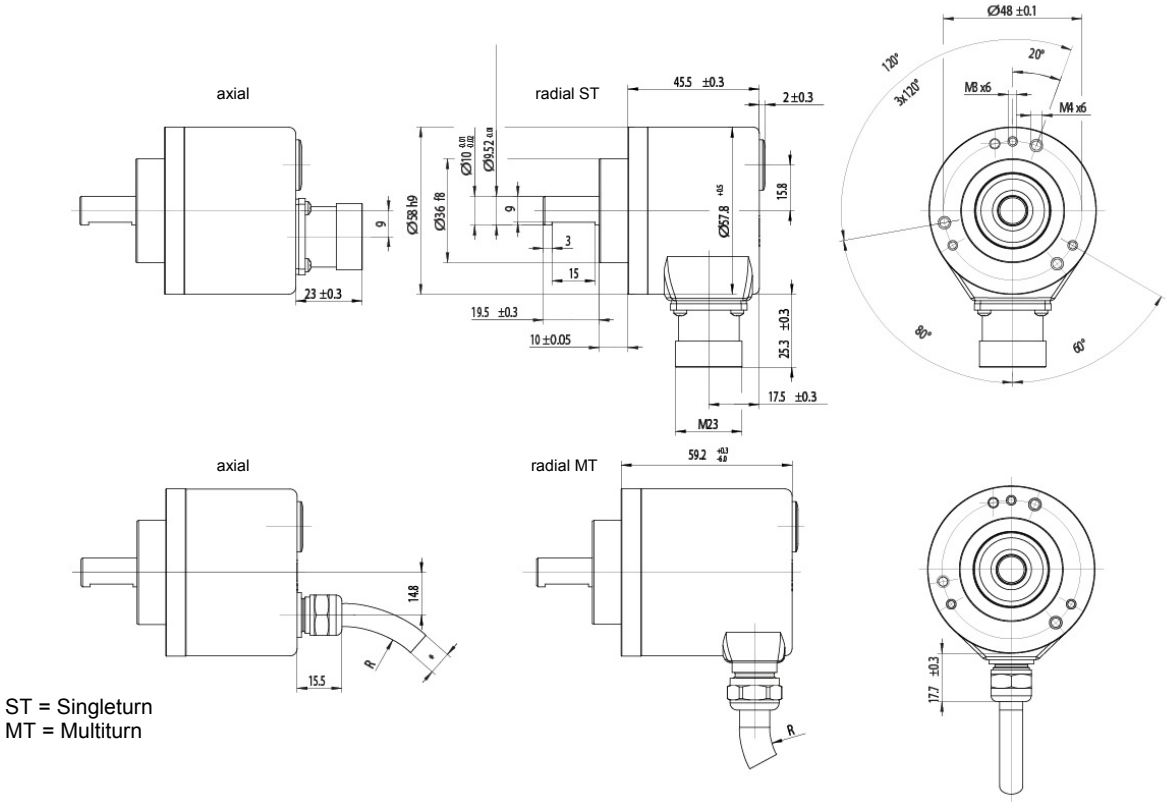
CABLE AND ELECTRICAL CONNECTIONS

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	$\overline{\text{Tristate}}$ S0 ÷ S8	$\overline{\text{Tristate}}$ S0 ÷ S9	$\overline{\text{Tristate}}$ S0 ÷ S11	$\overline{\text{Tristate}}$ S0 ÷ S12	$\overline{\text{Tristate}}$ S0 ÷ S13
Pink	$\overline{\text{Latch}}$	$\overline{\text{Latch}}$	$\overline{\text{Latch}}$	$\overline{\text{Latch}}$	$\overline{\text{Latch}}$
Green	$\overline{\text{Direction}}$	$\overline{\text{Direction}}$	$\overline{\text{Direction}}$	$\overline{\text{Direction}}$	$\overline{\text{Direction}}$
Black	0 V	0 V	0 V	0 V	0 V
Red	+ V	+ V	+ V	+ V	+ V
Brown	$\overline{\text{Alarm}}$	$\overline{\text{Alarm}}$	$\overline{\text{Alarm}}$	$\overline{\text{Alarm}}$	$\overline{\text{Alarm}}$

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	$\overline{\text{Tristate}}$ S0 ÷ S8	$\overline{\text{Tristate}}$ S0 ÷ S9	S11 (MSB)	S1	S2
13	$\overline{\text{Latch}}$	$\overline{\text{Latch}}$	$\overline{\text{Latch}}$	S0 (LSB)	S1
14	$\overline{\text{Direction}}$	$\overline{\text{Direction}}$	$\overline{\text{Direction}}$	$\overline{\text{Direction}}$	S0 (LSB)
15	0 V	0 V	0 V	0 V	0 V
16	+ V	+ V	+ V	+ V	+ V
17	$\overline{\text{Alarm}}$	$\overline{\text{Alarm}}$	$\overline{\text{Alarm}}$	$\overline{\text{Alarm / Latch}}$	$\overline{\text{Alarm / Latch}}$

DIMENSIONS



ST = Singleturn
MT = Multiturn

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.