

ROTACOD

Absolute multi turn encoders

Series

AST6 • AMT6

- US standard optical encoders
- Robust die-cast housing
- MIL standard connector
- Single turn up to 18 bit (262144 cpr) and multi turn up to 16x14 bit (65536 x 16384)
- High degree of protection, IP66
- BCD output code on request



AST6 • AMT6

ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 5-2000 Hz
Protection:	IP66, IP65 shaft side
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-40°C +100°C (-40°F +212°F) (98% R.H. without condensation)
Options:	• Operating temperature range: -40°C +100°C (-40°F +212°F) • IP66 protection shaft side

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque (at 20°C):	≤ 1,5 Ncm (typical)
Bearings life:	400x10 ⁶ rev. min. (10 ⁹ rev. min. with shaft loading of 20 N max.)
Electrical connections:	M23 or MIL plug, MIL 32 pin inline plug or cable output 1 m (3.3 ft)
Weight:	~ 400 g (14,1 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS

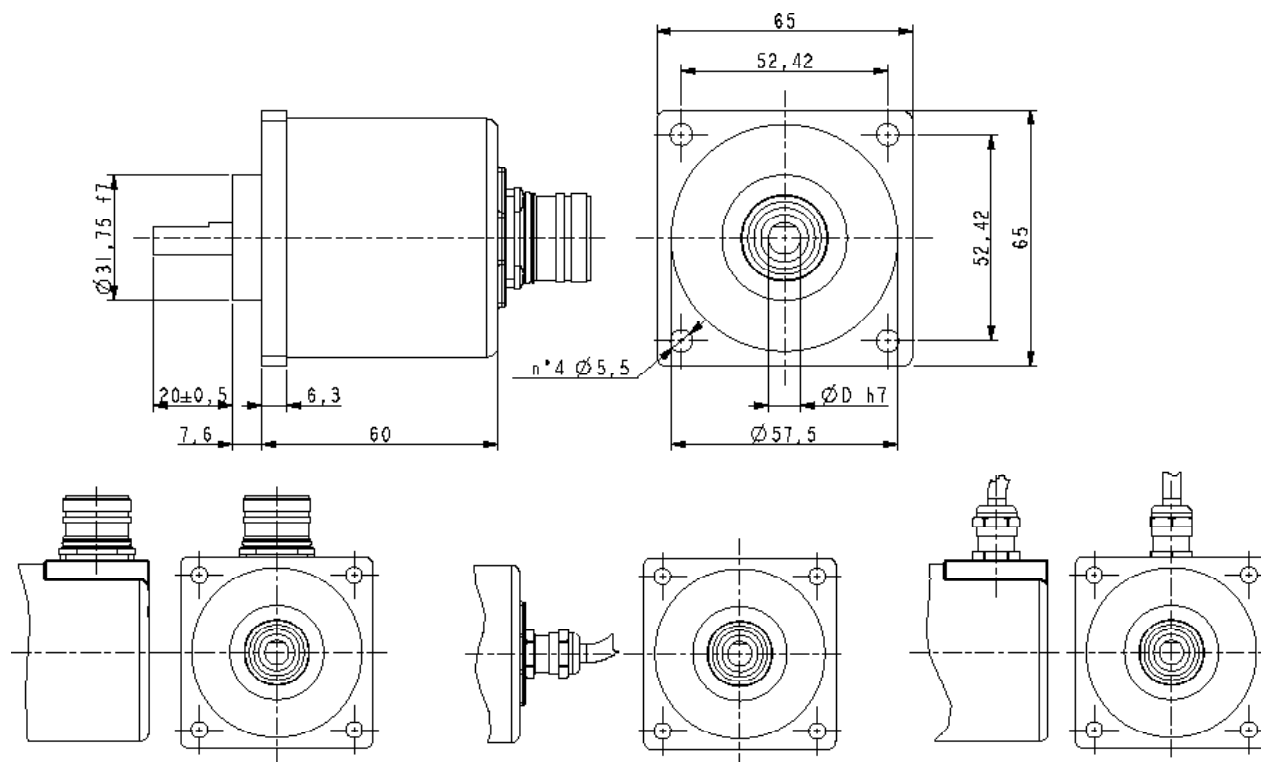
Resolution:	single turn = 1024, 4096, 8192, 16384, 65536, 262144 cpr multi turn = 4096, 16384 turns
Accuracy:	± 0,04°
Output circuits:	SSI (RS422), Bit parallel Push-Pull, NPN
Output code:	Gray, Binary
Counting frequency:	> 150 kHz
Power supply:	+7,5Vdc ÷ 34Vdc
Power consumption:	SSI: 1 W max., Bit parallel: 1,7 W max.
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4
Optoelectronic life:	> 100.000 h
Functions:	• counting direction (input) • Zero setting/Preset (input)

MATERIALS

Flange:	anticorodal, UNI EN AW-6082
Housing:	zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non magnetic, UNI EN 4305

ACCESSORIES

EPFL121H:	M23 12 pin connector
EPFL171H:	M23 17 pin connector
E10MLS:	MIL 10 pin connector
E19MLS:	MIL 19 pin connector
E32MLS:	MIL 32 pin connector
PAN/PGF:	flexible couplings
EC-CR12F-S28-T12-xx:	M23 cordset with xx m cable



AST6

Order code - Bit parallel output

AST6	XX (a)	/	XX (b)	-	XX (c)	-	X (d)	X (e)	X (f)	XXX (g)	/Sxxx (h)
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(a) RESOLUTION

10 = 1024 cpr
12 = 4096 cpr
13 = 8192 cpr

(b) OUTPUT

BY = Binary, Push-Pull
GY = Gray, Push-Pull
BN = Binary, NPN
GN = Gray, NPN
(BCD on request)

(c) SHAFT DIAMETER

6 = 6 mm
8 = 8 mm
P9 = 9.52mm / 3/8"
10 = 10 mm
12 = 12 mm

(d) OPERATING TEMPERATURE RANGE

- = -25°C +85°C (-13°F +185°F)
K = -40°C +100°C (-40°F +212°F)

(e) CONNECTION POSITION

- = axial
R = radial

(f) PROTECTION

- = IP65 shaft side
Q = IP66 shaft side

(g) CONNECTIONS

L1 = cable output 1 m (standard)
L5 = cable output 5 m
Lx = cable output x m
M2 = M23 17 pin plug
X = MIL 19 pin plug
Z1 = 1 m cable + DSub 15 pin plug

(h) CUSTOM VERSION

Order code - SSI output

AST6	XX (a)	/	XX (b)	-	XX (c)	-	X (d)	X (e)	X (f)	XX (g)	/Sxxx (h)
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(a) RESOLUTION

10 = 1024 cpr
12 = 4096 cpr
13 = 8192 cpr
14 = 16384 cpr
16 = 65536 cpr
18 = 262144 cpr

(b) OUTPUT

BS = Binary, SSI tree format
BA = Binary, SSI LSB aligned
GS = Gray, SSI tree format
GA = Gray, SSI LSB aligned

(c) SHAFT DIAMETER

6 = 6 mm
8 = 8 mm
P9 = 9.52mm / 3/8"
10 = 10 mm
12 = 12 mm

(d) OPERATING TEMPERATURE RANGE

- = -25°C +85°C (-13°F +185°F)
K = -40°C +100°C (-40°F +212°F)

(e) CONNECTION POSITION

- = axial
R = radial

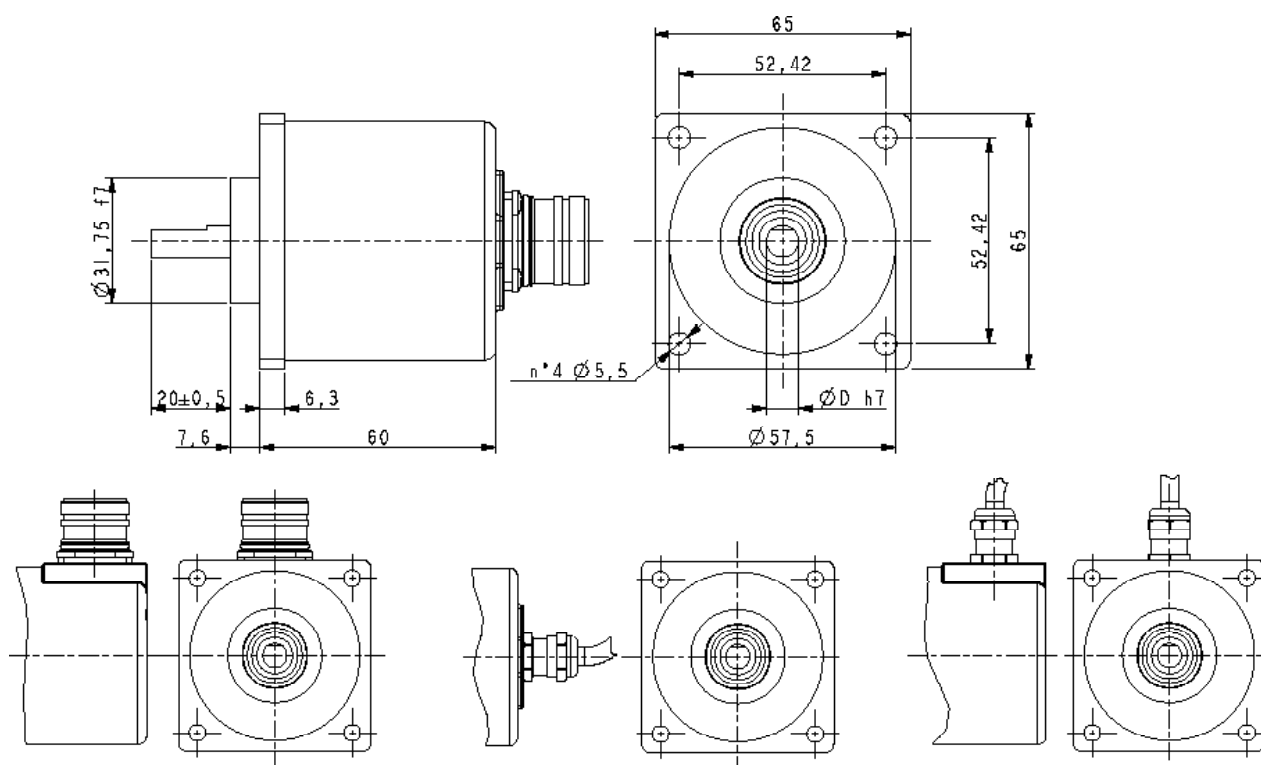
(f) PROTECTION

- = IP65 shaft side
Q = IP66 shaft side

(g) CONNECTIONS

L1 = cable output 1 m (standard)
L5 = cable output 5 m
Lx = cable output x m
CP = MIL 10 pin plug
M2 = M23 12 pin plug

(h) CUSTOM VERSION



AMT6

Order code - Bit parallel output

AMT6	XX (a)	/	XXXX (b)	XX (c)	-	XX (d)	-	X (e)	X (f)	X (g)	XXX (h)	/Sxxx (i)
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(a) RESOLUTION

10 = 1024 cpr
12 = 4096 cpr
13 = 8192 cpr

(b) REVOLUTIONS

4096 = 4096 turns

(c) OUTPUT

BY = Binary, Push-Pull
GY = Gray, Push-Pull
BN = Binary, NPN
GN = Gray, NPN
BCD on request

(d) SHAFT DIAMETER

6 = 6 mm
8 = 8 mm
P9 = 9.52mm / 3/8"
10 = 10 mm
12 = 12 mm

(e) OPERATING TEMP. RANGE

- = -25°C +85°C (-13°F +185°F)
K = -40°C +100°C (-40°F +212°F)

(f) CONNECTION POSITION

- = axial
R = radial

(g) PROTECTION

- = IP65 shaft side
Q = IP66 shaft side

(h) CONNECTIONS

L1 = cable output 1 m
L5 = cable output 5 m
L10 = cable output 10 m
Lx = cable output x m
V = MIL 32 pin plug

(i) CUSTOM VERSION

Order code - SSI output

AMT6	XX (a)	/	XXXX (b)	XX (c)	-	XX (d)	-	X (e)	X (f)	X (g)	XX (h)	/Sxxx (i)
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(a) RESOLUTION

10 = 1024 cpr
12 = 4096 cpr
13 = 8192 cpr
16 = 65536 cpr

(b) REVOLUTIONS

4096 = 4096 turns
16384 = 16384 turns
(16384 only with SSI LSB aligned)

(c) OUTPUT

BS = Binary, SSI tree format
BA = Binary, SSI LSB aligned
GS = Gray, SSI tree format
GA = Gray, SSI LSB aligned

(d) SHAFT DIAMETER

6 = 6 mm
8 = 8 mm
P9 = 9.52mm / 3/8"
10 = 10 mm
12 = 12 mm

(e) OPERATING TEMPERATURE

- = -25°C +85°C (-13°F +185°F)
K = -40°C +100°C (-40°F +212°F)

(f) CONNECTION POSITION

- = axial
R = radial

(g) PROTECTION

- = IP65 shaft side
Q = IP66 shaft side

(h) CONNECTIONS

L1 = cable output 1 m
L5 = cable output 5 m
Lx = cable output x m
CP = MIL 10 pin plug
M2 = M23 12 pin plug

(i) CUSTOM VERSION