

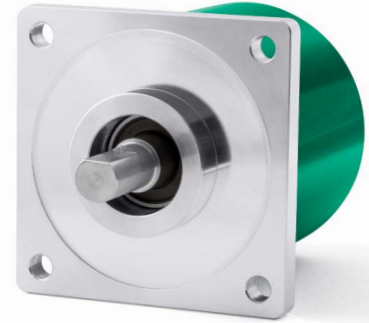
ROTACOD

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:	<ul style="list-style-type: none"> • 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

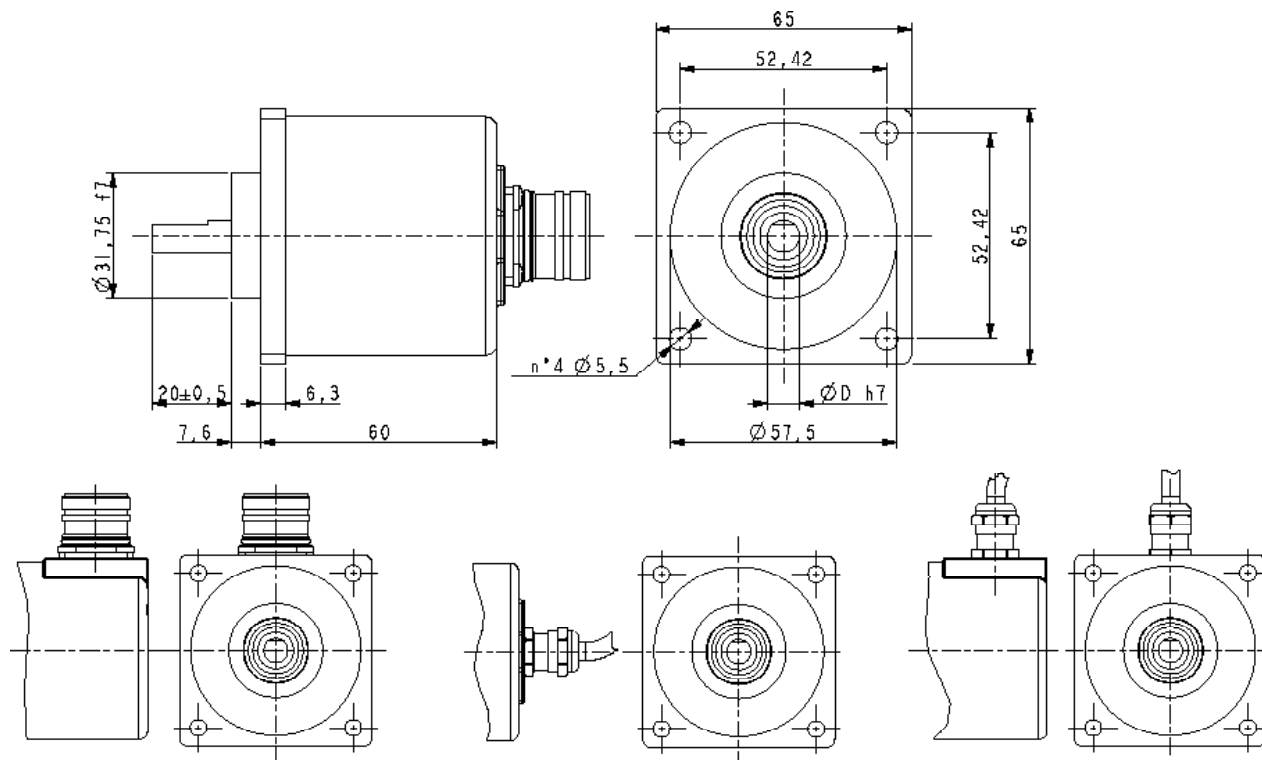
Resolution:	single turn = 1024, 4096, 8192, 16384, 65536, 262144 cpr multi turn = 4096, 16384 turns
Accuracy:	± 0,04°
Output circuits:	SSI (RS422), Bit parallel Push-Pull, NPN
Output code:	Gray, Binary
Counting frequency:	> 150 kHz
Power supply:	+7,5Vdc ÷ 34Vdc
Power consumption:	SSI: 1 W max., Bit parallel: 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:	<ul style="list-style-type: none"> • counting direction (input) • Zero setting/Preset (input)

MATERIALS

Flange:	anticorrosive, 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-CR17F-LK-A20-xx:	cordset xx m, M23 17 pin conn.
EC-CR12F-S28-T12-xx:	cordset xx m, M23 12 pin conn.



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
GO = Gray, SSI LSB aligned + 1024 PPR Line Driver

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

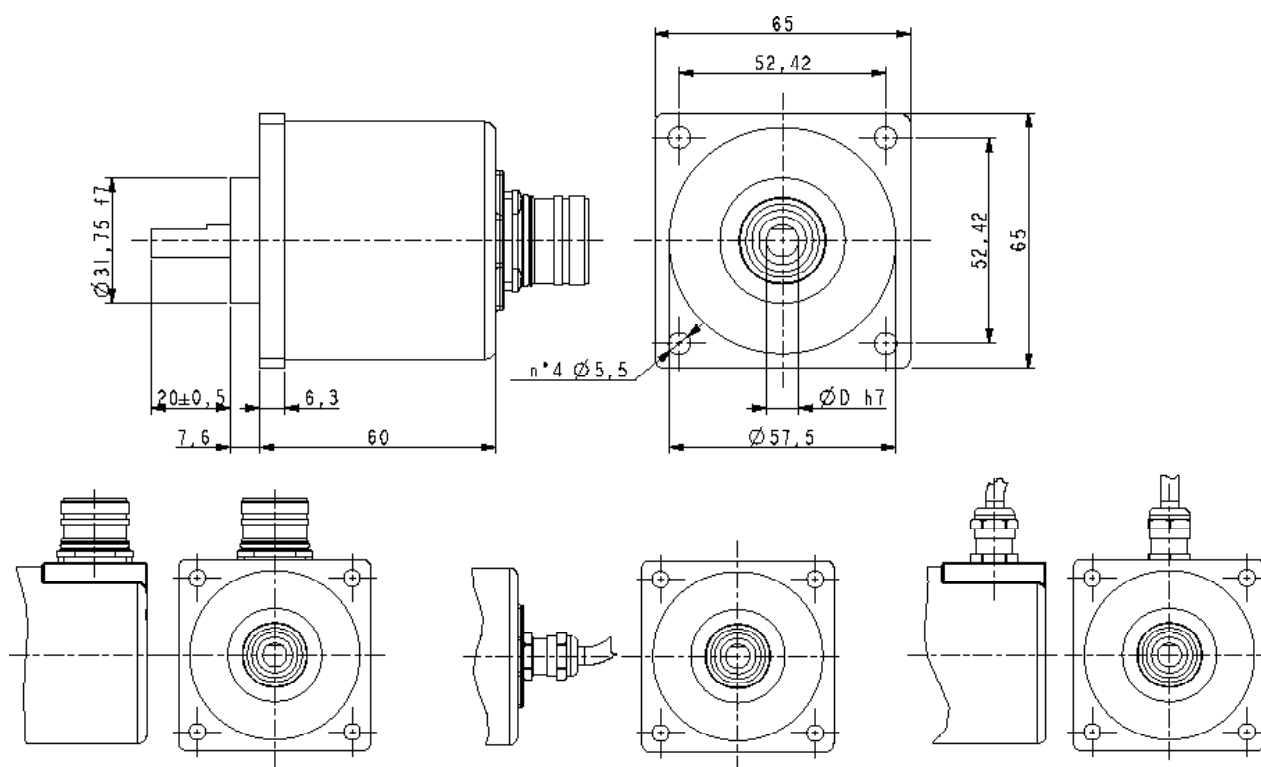
f PROTECTION

- = 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 Ⓐ	/	XXXX Ⓑ	XX Ⓒ	-	XX Ⓓ	-	X Ⓔ	X Ⓕ	X Ⓖ	XXX Ⓗ	/Sxxx Ⓘ
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<p>Ⓐ RESOLUTION</p> <p>10 = 1024 cpr 12 = 4096 cpr 13 = 8192 cpr</p> <p>Ⓑ REVOLUTIONS</p> <p>4096 = 4096 turns</p>	<p>Ⓒ OUTPUT</p> <p>BY = Binary, Push-Pull GY = Gray, Push-Pull BN = Binary, NPN GN = Gray, NPN BCD on request</p>	<p>Ⓓ SHAFT DIAMETER</p> <p>6 = 6 mm 8 = 8 mm P9 = 9.52mm / 3/8" 10 = 10 mm 12 = 12 mm</p> <p>Ⓔ OPERATING TEMP. RANGE</p> <p>- = -25°C +85°C (-13°F +185°F) K = -40°C +100°C (-40°F +212°F)</p>	<p>Ⓕ CONNECTION POSITION</p> <p>- = axial R = radial</p> <p>Ⓖ PROTECTION</p> <p>- = IP65 shaft side Q = IP66 shaft side</p>	<p>Ⓗ CONNECTIONS</p> <p>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</p>	<p>Ⓘ CUSTOM VERSION</p>
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Order code - SSI output

AMT6	XX Ⓐ	/	XXXX Ⓑ	XX Ⓒ	-	XX Ⓓ	-	X Ⓔ	X Ⓕ	X Ⓖ	XX Ⓗ	/Sxxx Ⓘ
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<p>Ⓐ RESOLUTION</p> <p>10 = 1024 cpr 12 = 4096 cpr 13 = 8192 cpr 16 = 65536 cpr</p> <p>Ⓑ REVOLUTIONS</p> <p>4096 = 4096 turns 16384 = 16384 turns (16384 only with SSI LSB aligned)</p>	<p>Ⓒ OUTPUT</p> <p>BS = Binary, SSI tree format BA = Binary, SSI LSB aligned GS = Gray, SSI tree format GA = Gray, SSI LSB aligned</p>	<p>Ⓓ SHAFT DIAMETER</p> <p>6 = 6 mm 8 = 8 mm P9 = 9.52mm / 3/8" 10 = 10 mm 12 = 12 mm</p> <p>Ⓔ OPERATING TEMPERATURE</p> <p>- = -25°C +85°C (-13°F +185°F) K = -40°C +100°C (-40°F +212°F)</p>	<p>Ⓕ CONNECTION POSITION</p> <p>- = axial R = radial</p> <p>Ⓖ PROTECTION</p> <p>- = IP65 shaft side Q = IP66 shaft side</p>	<p>Ⓗ CONNECTIONS</p> <p>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</p>	<p>Ⓘ CUSTOM VERSION</p>
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