

Pitch Encoder with Integral Bearing

February 2010

Wind Cluster®
Creating Synergy

Blind hollow shaft pitch encoder

Pitch encoders offered by Wind Cluster have been used in wind turbines in significant quantities and for many years of operation. The encoders have proved to contribute to extensive availability, ensuring a minimum of maintenance in the life time of the wind turbines.

To prevent magnetic field influence when installed at the pitch motor, the encoder uses optic reading technology. The encoder comes with easy start-up and operation: diagnostics LED, preset key with optical response, and status information.

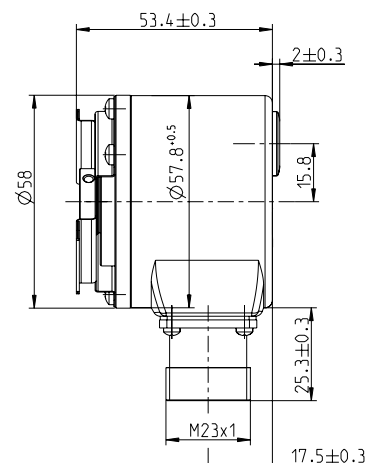
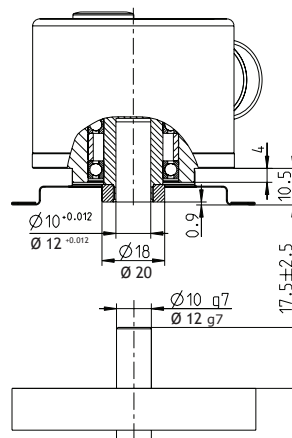
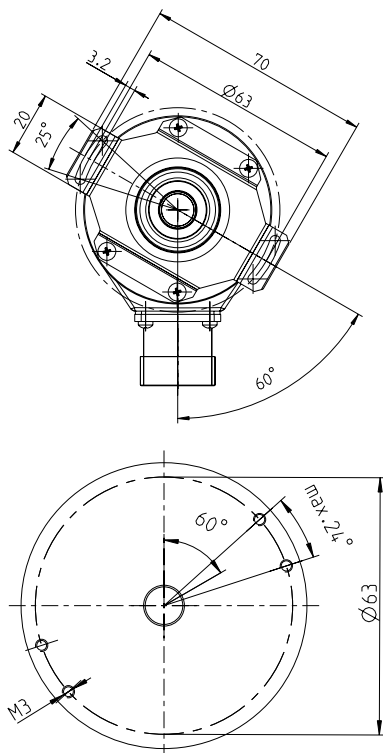
For easy mounting the encoders are offered with blind hollow shaft assembly directly on the motor shaft and are typically supplied with SSI for easy interface to primary brands of controllers used in the wind turbine industry. The encoders may be delivered with so-called shaft fits or other application adaptations needed for use in wind turbines.

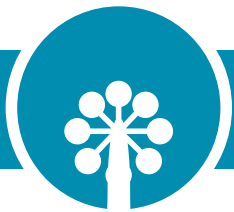


Features:

- Compact design
- Optic reading technology
- Resolution 12 bit multiturn, 13 bit singleturn
- Protection class, shaft and housing: IP64
- Shaft load axial / radial 40 N / 60 N
- Operating temperature: -40°C to +100°C

Dimensional drawings





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Technical Specifications

Line count	512
Interface (output):	SSI Gray + incremental signals
Output code:	SSI Gray + 512 incremental square pulses A 90° B
Output signal:	Push pull A 90° B complementary
Cutoff frequency (-3 dB):	130
Maximum speed (continuous)	15,000 rpm
Maximum speed (short term)	26,000 rpm
Fault detection signal (-UaS):	None
Resolution:	12 bit multiturn (4096 ppr) + 13 bit singleturn (8192 ppr)
Power supply:	DC 10 V...30 V
Coupling:	14 stator coupling for plane surface (hole Ø63 mm)
Shaft:	68C blind hollow shaft with clamping ring, Ø10 or 12 mm, depth min. 20 mm
Flange versions:	59 flange with 47 mm width across flats
Protection:	IP64 (EN 60529)
Operating temperature:	-40°C to 100°C
Electrical connection:	27S17 flange socket, male 17-pin M23
Cable	None
Pin configuration:	17-pin, E0 D533688
Connecting direction:	Radial

Type	Dimensions (mm)	
	150113-WC	150118-WC
Hollow shaft	10 ^{+0.012}	12 ^{+0.012}
Connecting shaft	10 _{g7}	12 _{g7}
Clamping ring Ø	18	20
L _{min}	15	18
L _{max}	20	20
Shaft code	"2"	"7"

L= Inside length of connection shaft

PIN	Signal
1	n.c.
2	DIR
3	n.c.
4	n.c.
5	SET
6	n.c.
7	UIN
8	Clock
9	Clock/
10	GND
11	n.c.
12	B
13	B/
14	Data
15	A
16	A/
17	Data/

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