

The **STD-27** is a contact-less optical reflective absolute position sensor. It has Integrated dual sensing heads and advanced processing, which gives it a very high precision over a low profile and redundant core.

The **STD-27** support SSI & BiSS-C interfaces.

The wide assembly tolerance of the **STD-27** makes it easy to install and align, its plug and-play approach makes it simple to design into any application.

High precision single turn, optical reflective absolute position sensor

- Contact less
- Dual core, redundant - Duplus core technology
- Low profile
- High resolution
- High accuracy

Dimensions			
OD stator	mm	27	
Shaft	mm	4.76	
Height	mm	33	

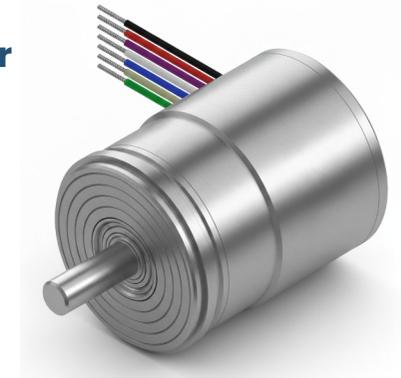
#### Environment Condition's

Temperature, operational	-45 to +85 C°
Humidity	95% relative humidity, Non condensing, IEC 60068-2-78
IP rating	IP64
Shock	400 m/s <sup>2</sup> , 6 ms, ½ sine, 3 axes
Vibration	200 m/s <sup>2</sup> max @ 55 Hz to 2000 Hz, 3 axes
EMC compliance	IEC 61326-1

1. The encoder may withstand exposure to vibrations according to MIL-STD-810F Method 514.5 Category 20 (Ground Vehicles).
2. The encoder may be resistant to a mechanical shock of 40 g in magnitude for 6 ms (at least 3 times in both directions along each of the orthogonal axes).
3. The encoder may be tested according to MIL-STD-810F Method 516.5 Procedure I (Functional Test for Ground Equipment).

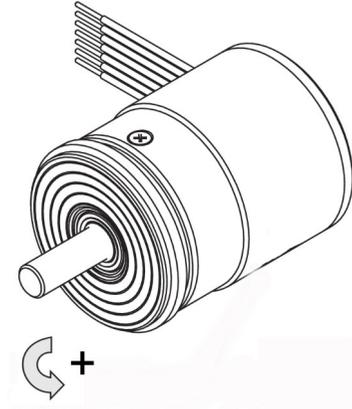
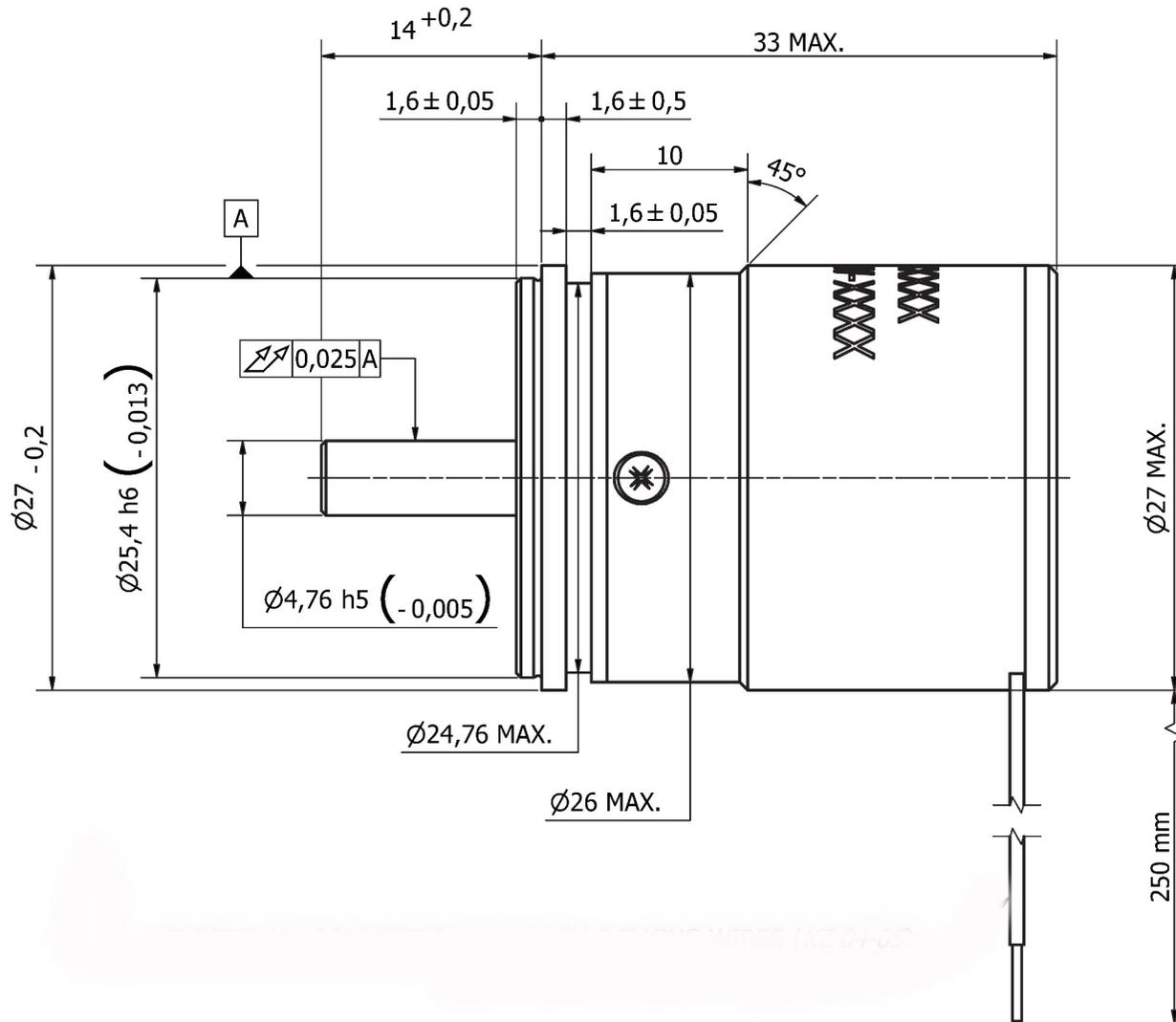
# STD-27

## Absolute Position Sensor



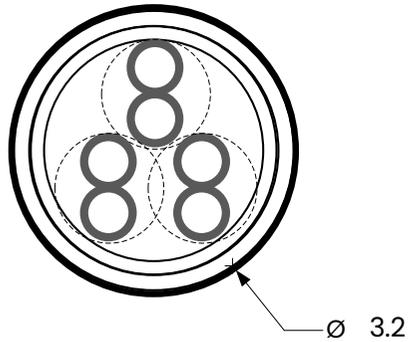
#### Characteristic's

Resolution <sup>1</sup>	bit	18 - 23
Accuracy [INL]	mdeg	± 2
Repeatability	count	± 1
Data latency	µsec	20
Startup time	msec	20
Current consumption	mA	200
Power supply	VDC	5 ± 5%
Rotation speed, max	RPM	5,000
Rotor moment of inertia	Kgm <sup>2</sup>	< 8 x 10 <sup>-8</sup>
Shaft load (at shaft end):		
- Axial	N	5
- Radial		
Starting torque @20° C	mNm	< 0.5
Weight	gr	50



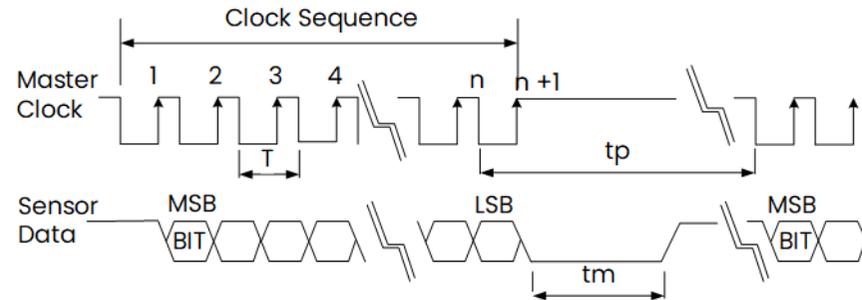
Default positive direction (configurable)



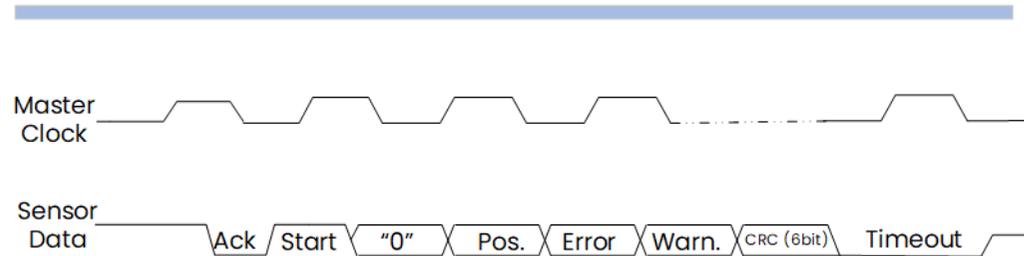


Cable	Twisted pair , Ø3.2 ± 0.15 mm
Wire	AWG 30 21/0.05 mm tinned copper Insulation - PFE Ø 0.6 ± 0.07 mm
Shield	Thinned copper braided 85%
Binder	FEB black
T. Rating	-40 / + 150 ° C

DB9	Function	Color	
6	Return	Black	
4	5 VDC	RED	
7	Data +	Green	
8	Data -	Yellow	
2	Clock +	Gray	
3	Clock -	Blue	
	Shield		



	Description	Recommended
f	clock frequency (max)	1.8 MHz
tp	pause time	> 21 µsec
tm	transfer time (monoflop time)	= 20 µsec
BIT	Build In Test (MSB, Optional)	



	Description	
Pos.	Number of data bits	18 - 22
Error	Error bit - active low	1
Warn.	Warning bit - active low	1
CRC	CRC polynomial inverted	6



Sensor manufactured by statum motion are warranted to be free from defects in materials and workmanship for a period of 12 months from the date of shipment.

### Warranty Coverage

This warranty covers the replacement or repair of faulty encoders at no charge, provided that the following conditions are met:

- The sensor was installed, operated, and stored in accordance with the manufacturer's instructions.
- The sensor was not subjected to improper installation, misuse, or abuse.
- The sensor was not disassembled or repaired by the customer.

Ordering

<b>STD27</b>	a	b	c	d	e	f
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a	b	c	d	e	f
Resolution <sup>1</sup>	Comm.	Cable	Length	Board	Custom
18-22	B – Biss C S – SSi	1 – Flying leads 2 – DB9 connector	1 – 250 mm 2 – 500 mm	1 – Standard 2 – Conformal coating	

Stator board protection	
PCB assemble	IPC 610 Class 3
PCB	IPC 620 Class 3
Sensor harness assembly	IPC-A 620 Class 3
Conformal coating (optional)	UVCL ; UV cure conformal coating



*Product specifications are subject to change without prior notice.*

*The product images shown are for illustration purposes only and may not be an exact representation of the product*



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