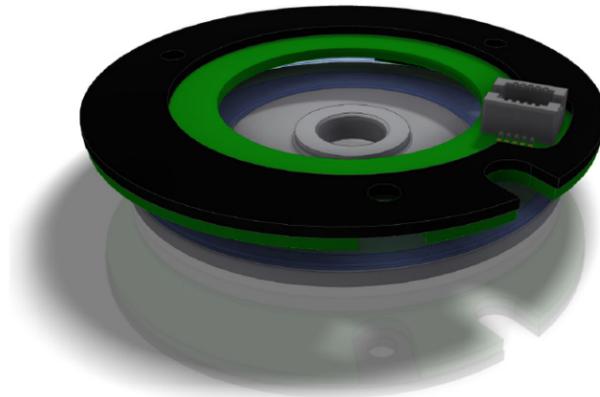
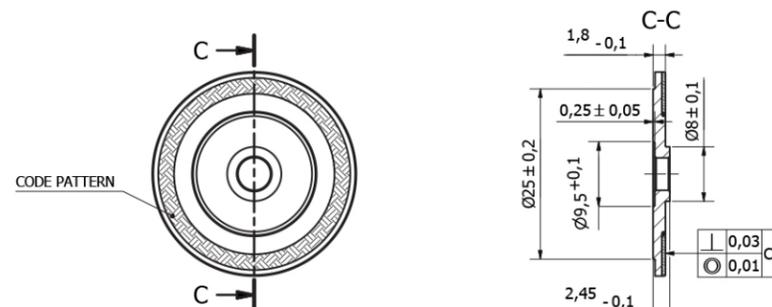
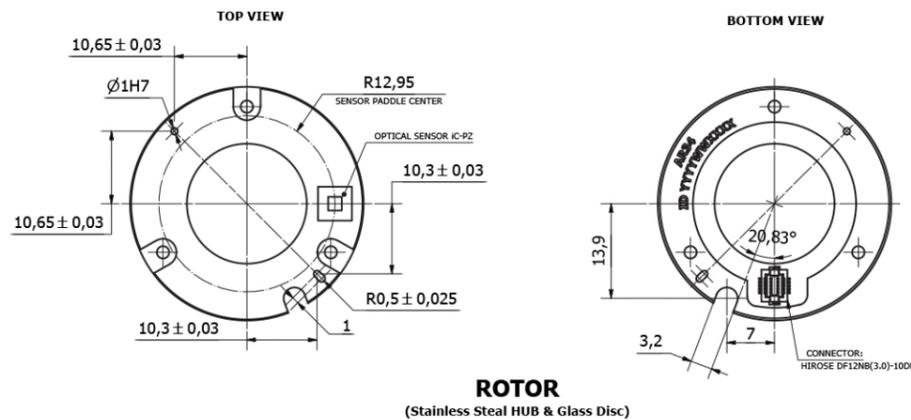
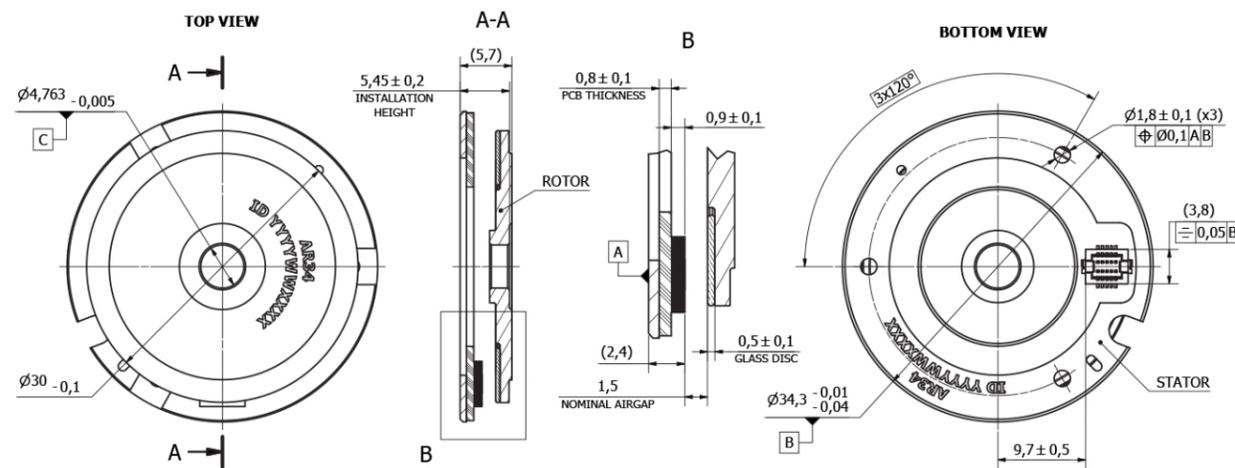


PHOTOELECTRIC ROTARY ENCODER KIT

AR34



This is a photoelectric absolute rotary encoder kit that can have up to 22 bit singleturn resolution and SSI output signal interface.



MECHANICAL DATA

Airgap	$1,5_{-0,1}^{+0,6}$ mm
Radial Misalignment between rotor and stator	< 0.3 mm
Tangential Misalignment between rotor and stator	< 0.3 mm
Runout sensitivity (mechanical only - customer shaft)	< 0.05 mm
Weight	< 15 g
Ambient Temperature	-40°C to +85°C
Storage Time	15 years
Relative Humidity	70%RH

Vibrations:

- operational	3.17 G's RMS] 20=2000 [Hz] for 5 [min], along three major axes
- storage	15 G's RMS] 10=2000 [Hz] for 4 [hour], along three major axes

Mechanical Shock

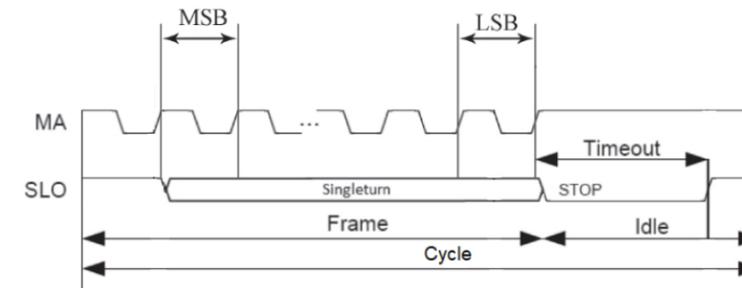
180 g, 20 ms, 1/2 sine, along 3 major axes in both directions

ELECTRICAL DATA

Counts per turn	4.194.304 (2 ²²)
Accuracy	< $\pm 0,2^\circ$
Measurement Noise (at static position)	< $\pm 2LSB$
Repeatability	< $\pm 2LSB$
Micro-linearity error (DNL)	< $\pm 4LSB$
Data Latency Nominal Value	< 20 μs
Data Latency Nominal Uncertainty	< 5 μs
Rotation Speed	5000 RPM (mechanical survival) Up to 150 RPM - full electrical performance Up to 300 RPM - independent linearity < 0.3 deg.
Encoder input voltage	5 $\pm 0,25$ V
Current draw	< 150 mA
Data output format	SSI + ABZ
SSI clock frequency	1 < f _{clock} < 10 MHz
Power up to full performance time	< 20 ms
Sensors refresh rate	20 KHz
Sampling rate	> 10 KHz

INTERFACE

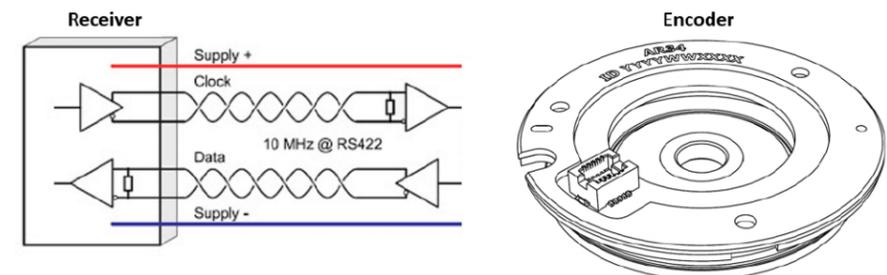
DATA TRANSFER SSI



MA - clock signal, SLO - data signal, LSB - least significant bit, MSB - most significant bit

DESCRIPTION	DATA
T _{timeout}	Typ. 20 us
Clock frequency	1 - 10 MHz

TYPICAL OPERATING CIRCUIT FOR SSI



CONNECTOR

Hirose connector: DF12NC(3.0)-10DP-0.5V(51)

PIN-OUT DESCRIPTION

SIGNAL	PIN. NO
Gnd	5
Vdd(+5V)	6
Clk-	3
Clk+	4
Data-	1
Data+	2
NC	7
Z	8
B	9
A	10

ORDER FORM

AR34 - X1 - X2 - X3

Singleturn bit number (X1):	Code (X2):	Adapter Cable (X3):
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B1 - 1 B - Binary W - without cable
B22 - 22 G - Grey AC01 - 1m

ORDER EXAMPLE: 1) AR34-B22-G-AC01