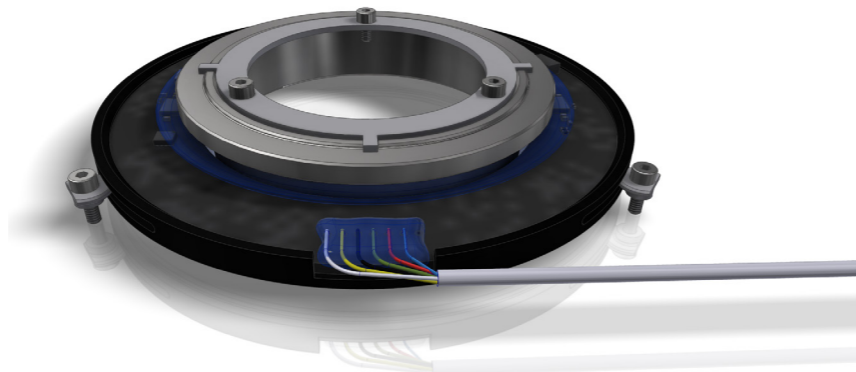


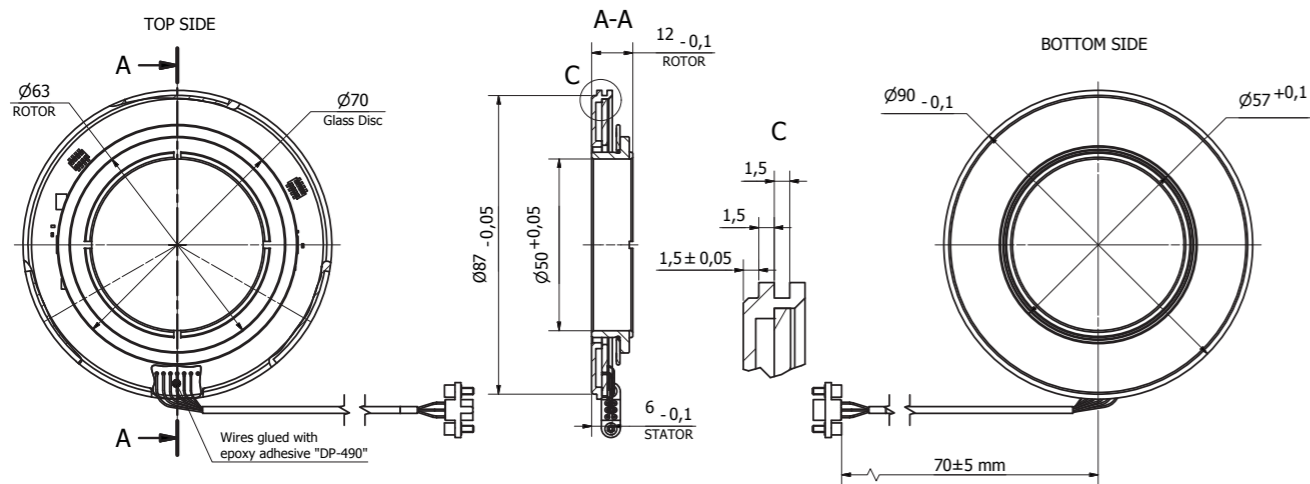
# AR SERIES

AR90



This is a high-resolution, singleturn absolute encoder with a 22 Bit BiSS-C interface. The encoder consists of several optical reflectance sensors arranged at an angle of 180 degrees to each other. This allows to

eliminate mechanical errors in the application, such as the runout of the measured shaft, by using subsequent electronics.



## MECHANICAL DATA

Maximum shaft speed	20000 rpm	Supply current	80 - 220 mA
Moment of inertia of rotor	$< 50 \times 10^{-6} \text{ kgm}^2$	Start up time	13 ms
Permissible vibration (55 to 2000 Hz)	$\leq 100 \text{ ms}^2$	Scan ratio of T	40 - 60 %
Permissible shock (11 ms)	$\leq 200 \text{ ms}^2$	Time lag	80 ns
Protection (IEC 529)	IP00	Monoflop time	timeout + T/2 us
Max. weight (without cable)	0.09 kg	Rise and fall time	4 - 15 ns
Operating temperature	-40...+100 °C	Analog signals	~ 1Vpp (1024 ppr)
Storage temperature	-40...+100°C	Cutoff frequency	< 240 kHz
Maximum humidity (non-condensing)	98 %	Amplitude output voltage	0.6 - 1.2 V <sub>DC</sub>
		Output current	22 mA

## ELECTRICAL DATA

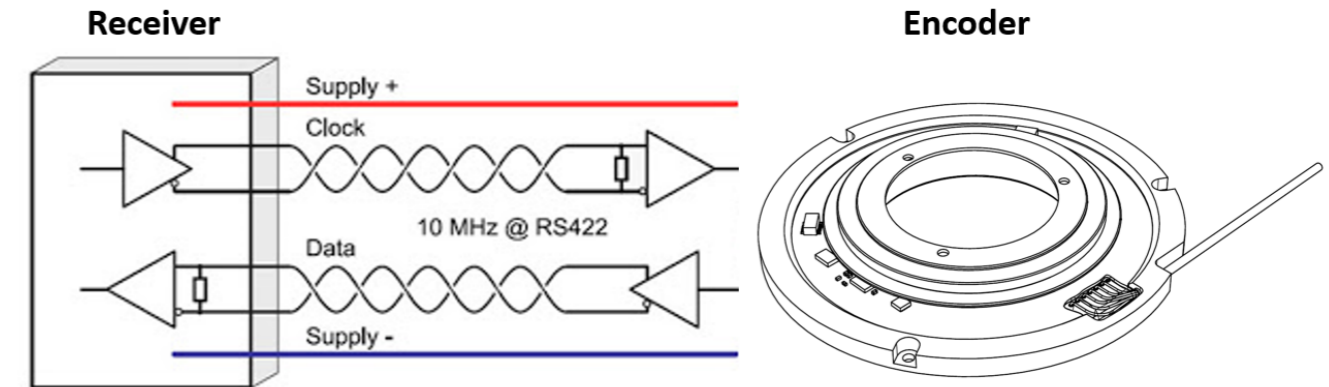
Accuracy*	±20"
Output code	Binary
Data interface	BiSS C
Supply voltage	+5V ± 5%;

\*Expected at optimum installation, additional deviations due to mounting and inaccuracy of the measured shaft are not taken into account.

## INTERFACE

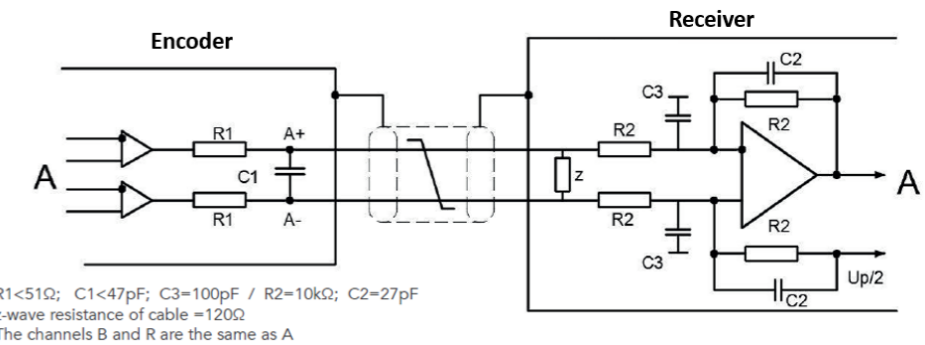
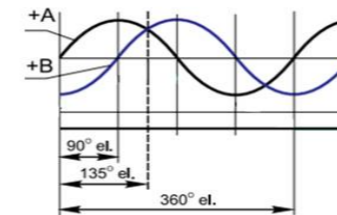
### TYPICAL OPERATING CIRCUIT FOR BISS-C

DESCRIPTION	DATA
T <sub>timeout</sub>	0.075 us - 24 us
Clock frequency	62.4 kHz - 20 MHz

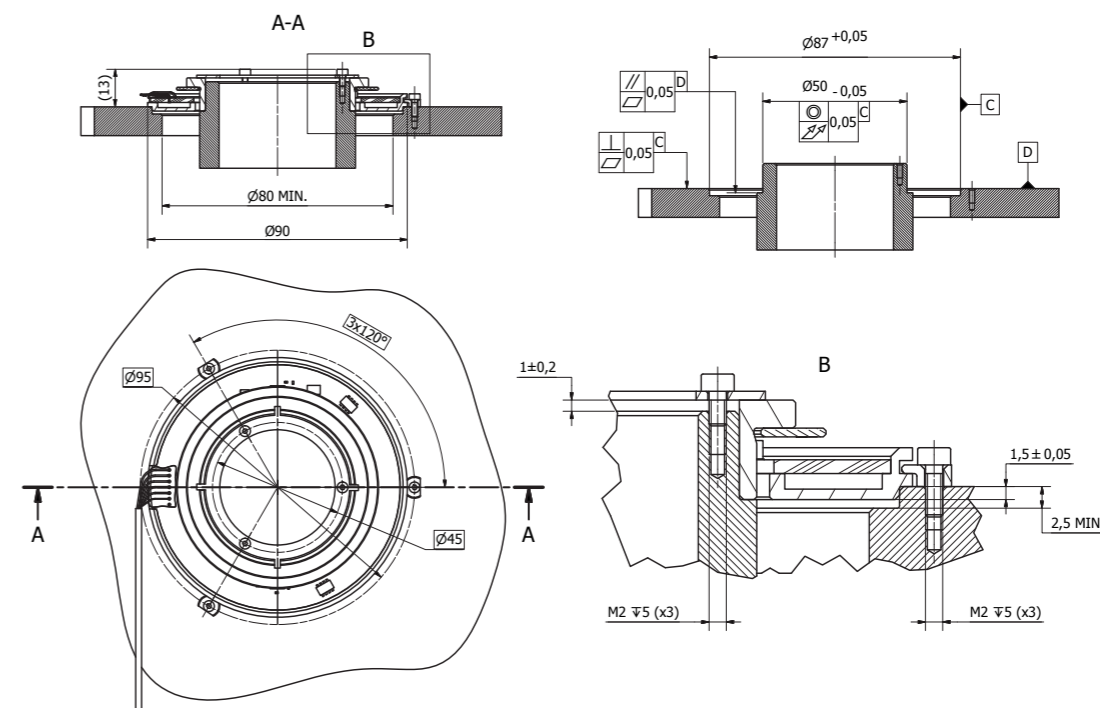


Operating circuit for all 3 encoder versions.

### SINE-WAVE VOLTAGE SIGNAL



## MOUNTING DIMENSIONS



This is just one example of a tailor made encoder kit. For other mechanical, electrical configurations or different interface options please contact us directly: sales@precizika.com