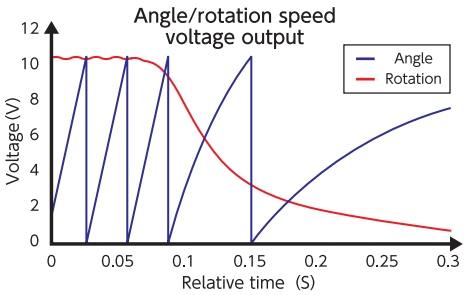
Optimal tool for an angle and velocity measurement using a resolver

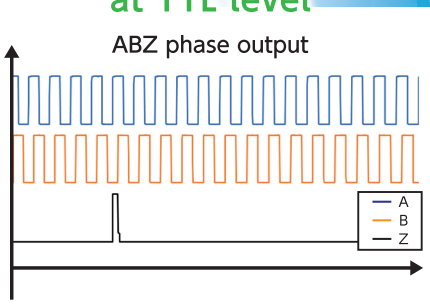
RDC-100

Resolver Measurement Amplifier

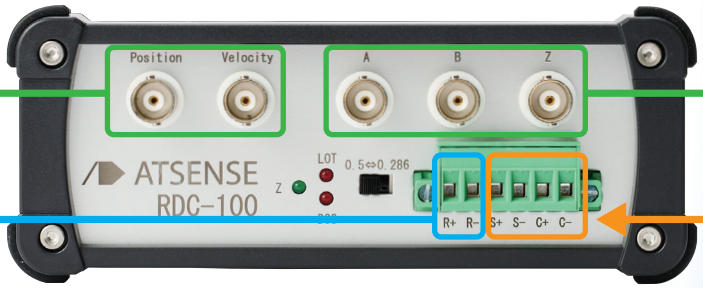
Analog voltage outputs for angle and velocity



A,B,Z phase outputs at TTL level

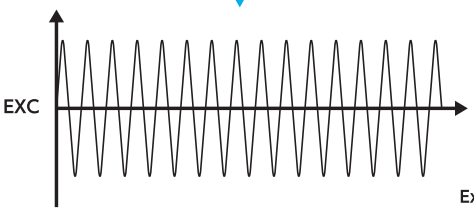


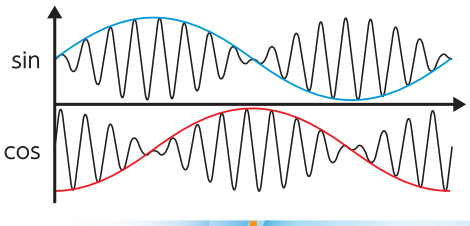
- Analog voltage output proportional to velocity (±10V)
- Analog voltage output proportional to angle (0～10V)



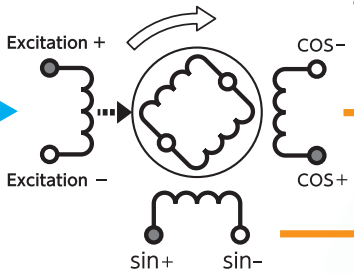
- Compatible with multiple transformation ratios and shaft angle multiplications
- Selectable excitation frequency from 2 to 20 kHz

Resolver Measurement Amplifier RDC-100





Excitation signal



sin,cos signal

- Eliminates the complexity of using an R/D converter IC
- Analog voltage output proportional to angle and velocity
  (angle:0～10V, rotation velocity:±10V)
- Compatible with various resolvers
  (transformer ratio:0.286/0.5, shaft angle multiplication:×1～×20)

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Specifications

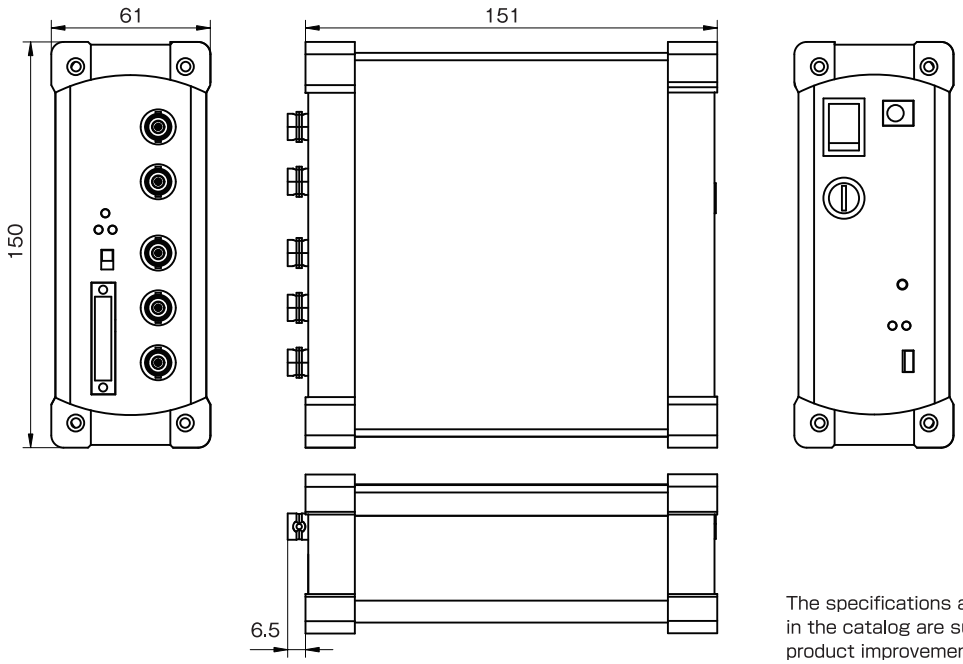
Resolver	
type	amplitude modulation type
transformer ratio	0.286 or 0.5 (selectable by mechanical switch)
shaft angle multiplication	×1～×20
input impedance	about 100～200Ω
Excitation signal (output)	
signal	sine wave
frequency	2～20kHz
voltage (transformer ratio 0.286)	differential 11.4Vp-p
voltage (transformer ratio 0.5)	differential 6.2Vp-p
output current	200mA maximum
Input signal (sin, cos modulation signal)	
voltage limit	differential 2.3～4.0Vp-p
current limit	8.25μA
input impedance	485kΩ
resolver measurement (RDC specifications)	
angular resolution	selectable from 10,12,14,16bit
angle accuracy (arc min)	±5arc min(Typical),±10arc min(Max)
angle accuracy	±0.08°(Typical), ±0.16°(Max)
velocity resolution	selectable from 10,12,14,16bit
acceleration error	30 arc min
filter	common mode filter

Digital output (ABZ phase signal)	
voltage	0～5V
resolution	selectable from 10, 12, 14 bit for electrical angle
pulse rate	selectable from 256,1024,4096 p/rev for mechanical angle
Analog output	
angle voltage	0～10V(0-360°)
rotation velocity voltage	±10V(±1-±20000 r/min)
rotation range	0～20000 r/min (resolution dependent)
delay time	5～12μs
General specifications	
PC interface	USB(USB-serial bridge)
insulation specification	power supply - ground - each GND
power supply	DC12V(10～18V)
body case	aluminum case
external dimensions	W151×D150×H61mm
weight	about 640g
operating temperature range	0～40℃(no condensation)

※ This product is used in a one-to-one relationship with a resolver.
The resolver signal used for control cannot be branched and used.

Physical Dimensions

(Unit : mm)



The specifications and appearances specified in the catalog are subject to changes due to product improvements without notice.

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ATSENSE October 03.2022

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Created using the 3rd Supplementary Business Restructuring Subsidy for FY2020