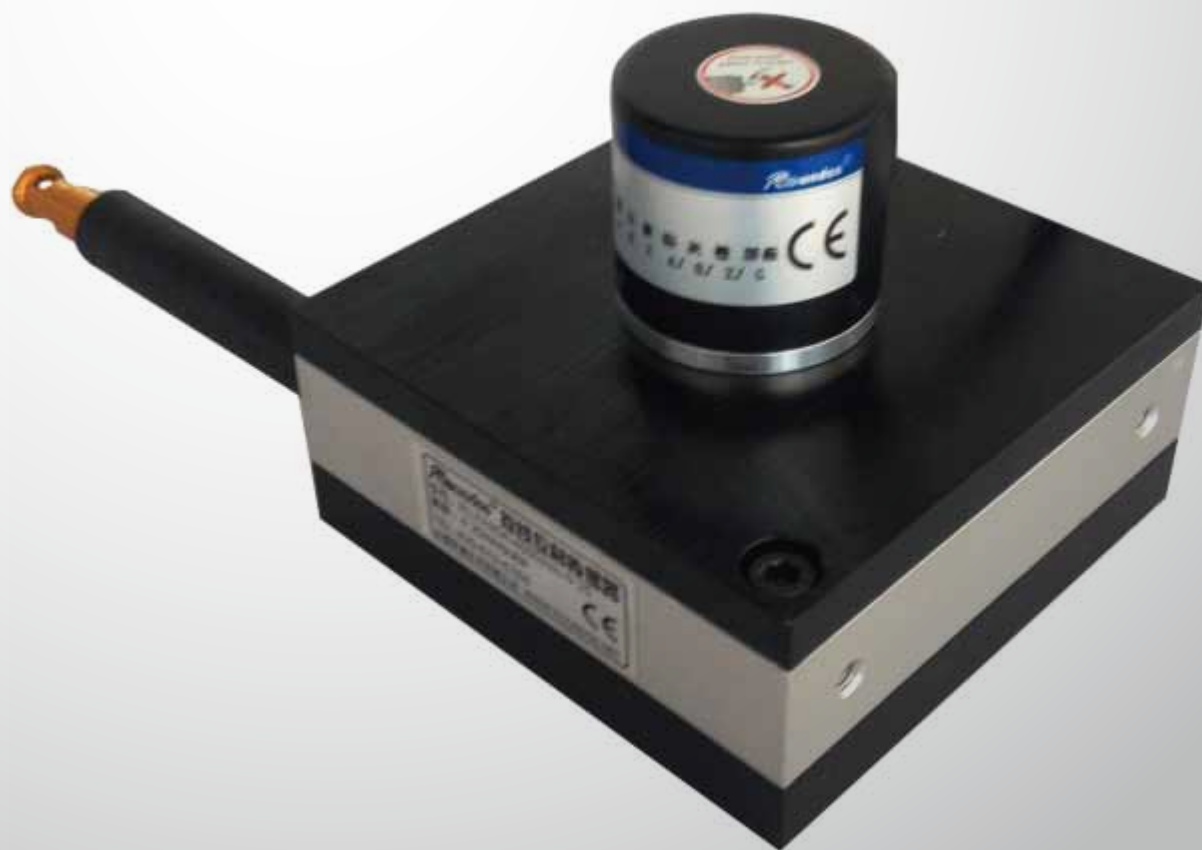


# 产品选型手册

Product selection guide



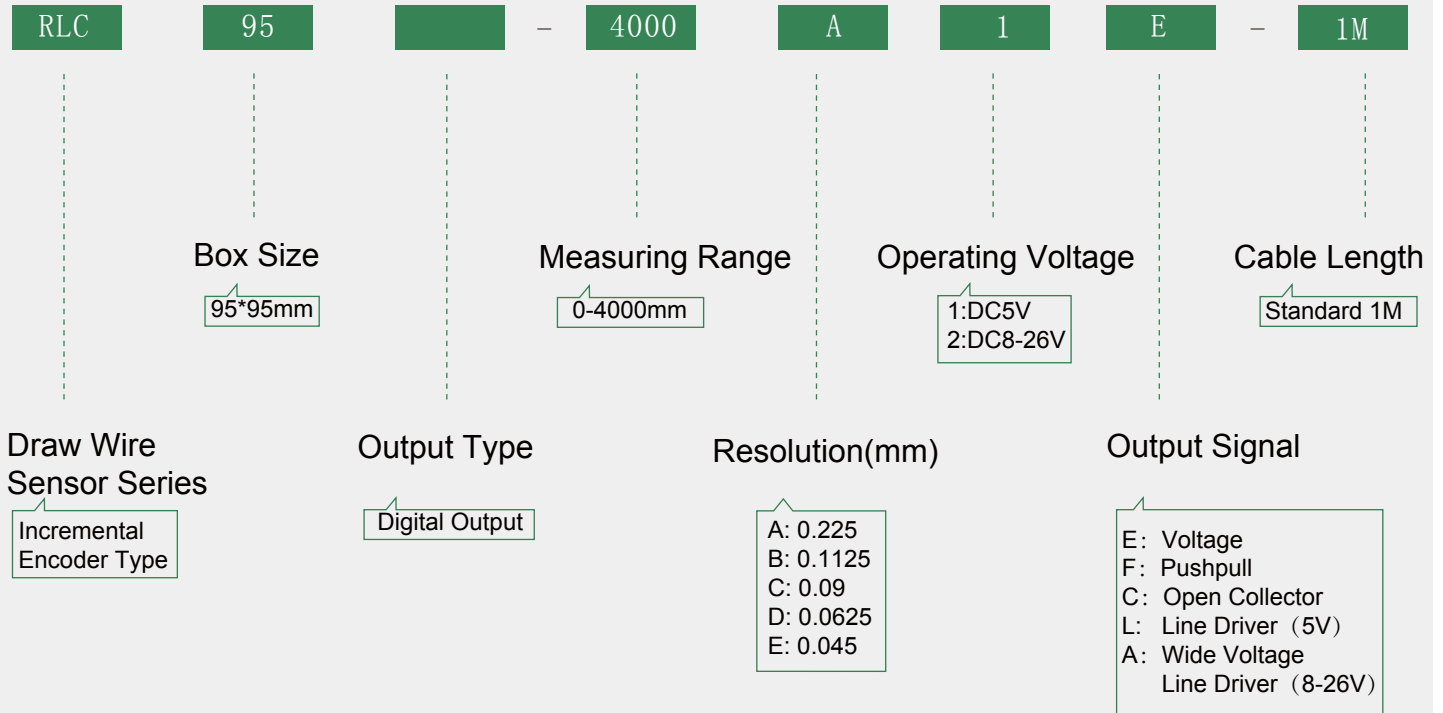
RLC95D Draw Wire Sensor

# Digital Signal Output Type



Incremental encoder and absolute encoder are optional for the digital signal output type. Output signals are square wave ABZ signals or Gray code signals. Measurement range is up to 4000mm. Linear accuracy: 0.05% FS. Resolution based on the different configuration can reach 0.001mm / pulse in maximum. Working temperature: -30 ° C-+90 ° C.

## Part Number



## Mechanical Specifications

|                             |  |
|-----------------------------|--|
| Measuring Range             | 0—4000mm optional  |
| Housing                     | Aluminium alloy, oxidation surface treating, wear and corrosion prevention |
| Wire Rope                   | 0.6mm high flexible imported plastic coated wire rope                      |
| Wire retraction force (min) | appr. 1N   |
| Wire extension force (max)  | appr. 2.5N   |
| Linear Accuracy             | 0.05%FS  |
| Repeatability Accuracy      | 0.01%  |
| Life                        | >10 million times  |

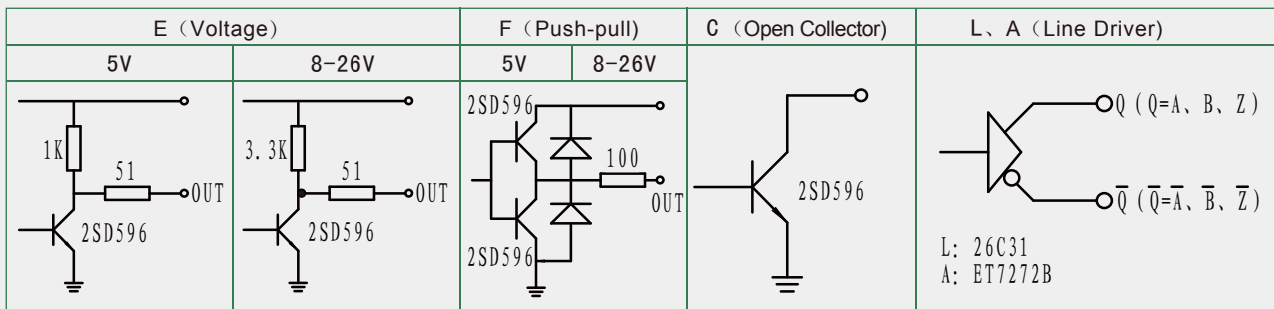
# Electrical Specifications

|                          |                                    |           |                |                  |                                  |
|--------------------------|------------------------------------|-----------|----------------|------------------|----------------------------------|
| Sensor Element           | Incremental Encoder                |           |                |                  |                                  |
| Electrical Connection    | Cable Radial, 1m                   |           |                |                  |                                  |
| Output Model             | Voltage                            | Push-Pull | Open Collector | Line Driver (5V) | Wide Voltage Line Driver (8-26V) |
| Operating Voltage        | DC5V/8-26V                         |           |                |                  |                                  |
| Sensor Resolution(mm)    | 0.225                              | 0.1125    | 0.09           | 0.0625           | 0.045                            |
| Encoder Resolution (ppr) | 1000                               | 2000      | 2500           | 3600             | 5000                             |
| Max. Reciprocating Speed | 1000mm/s                           |           |                |                  |                                  |
| Reciprocating Frequency  | 50 Hz(See Reciprocating Amplitude) |           |                |                  |                                  |

# Environmental Specifications

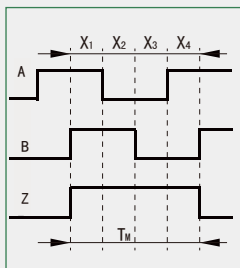
|                      |                 |
|----------------------|-----------------|
| Temperature Range    | -30°C—90°C      |
| Vibration Resistance | 10HZ—1500HZ 10G |
| Protection Class     | IP54(Standard)  |
| Weight(kg)           | 0.85            |

# Output Circuit

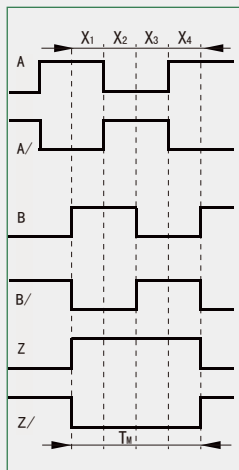


Note: C, F output provide ground protection diode

# Output Waveform



Waveform for C, E, F output



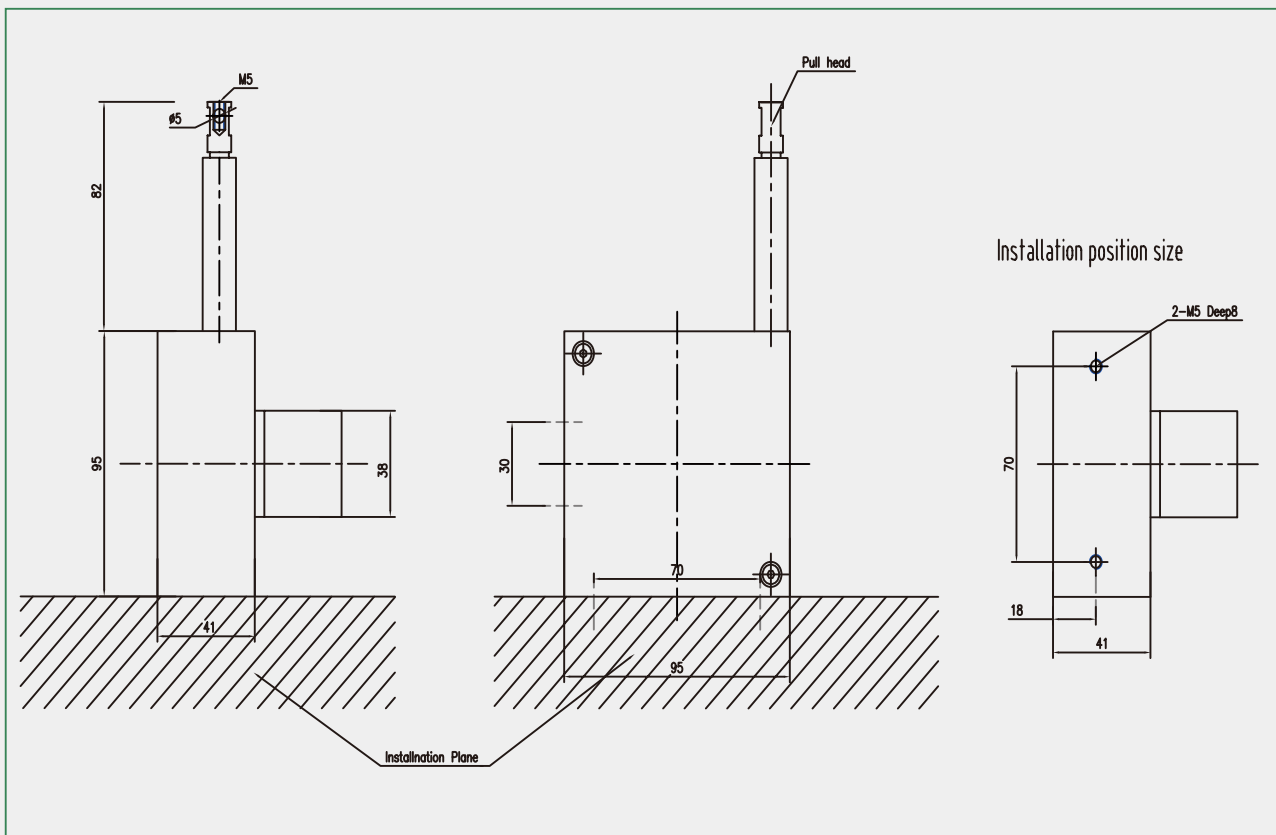
Waveform for L, A output

- Wave Ratio :  $X1+X2=0.5T \pm 0.1T$   
 $X2+X3=0.5T \pm 0.1T$
- Phase Different :  $Xn \geq 0.125T$  ( $n=1, 2, 3, 4$ )
- Absolute Angle Error:  $\leq 0.2T$
- Cycle Error :  $\leq 0.05T$
- $T=360^\circ / N$  ( $N$ =lines count per revolution)
- Width of Z signal
- 1、 $Tm=1T \pm 0.5T$   
 $Tm=nT \pm 0.1T$  ( $n \geq 2$ )
- The phase relationship of Z signal and A,B signal is not stipulated.
- 2、 $Tm=0.5T \pm 0.25T$   
 $Tm=0.25T \pm 0.125T$   
 $Tm=0.25T \pm 0.125T$

The picture shows the clockwise (CW) waveform from the shaft side.

| Cable Color    | Red | Yellow | White | Black | Green | Grey | Brown | Orange | Shield |
|----------------|-----|--------|-------|-------|-------|------|-------|--------|--------|
| Line Driver    | Vcc | Z      | B     | OV    | A     | B/   | A/    | Z/     | G      |
| Voltage        | Vcc | Z      | B     | OV    | A     | -    | -     | -      | G      |
| Open Collector | Vcc | Z      | B     | OV    | A     | -    | -     | -      | G      |
| Push-pull      | Vcc | Z      | B     | OV    | A     | -    | -     | -      | G      |

## Mechanical Drawings



## Notes

1. Damage may occur if wire is released and allowed to retract without tension.
2. Make certain the wire path is clear of objects or sharp edges to prevent wire damage.
3. Wire should exit as straight as possible. A pulley may be used to redirect it.
4. Please connect the cable according to the specifications of electrical connections.  
Make sure the connections are correct when power is on.
5. Draw wire sensor is a precision instrument. Knocking is forbidden.  
Please ensure the cleanness of the equipment and wire to prolong the service life.
6. Avoid external force on wire.
7. Do not self-dismantle for that the strong spring inside the sensor may hurt you.

