

FCSS Series

Grating Scale



Feature:

- Improved design, durable mechanical performance is more stable.
- Repeatability up to 1um, the highest resolution 0.1 um and 0.2 um and 0.5 um, 1 um, um optional 2, reflex signal acquisition module
- Output signal: 5V TTL/ differential.

Usage:

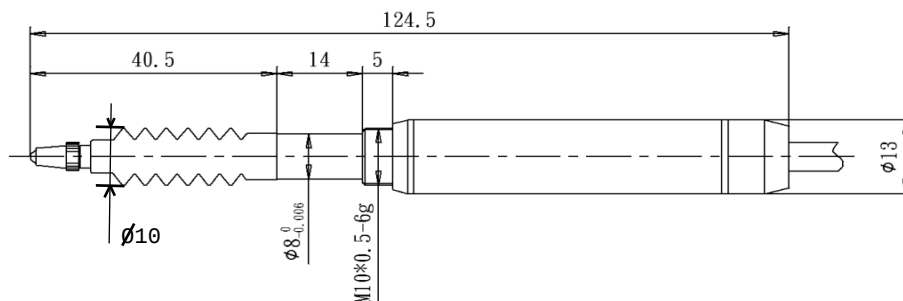
- Robotics, laboratory measurement
- Medical, film testing
- Precision modern processing equipment

Details:

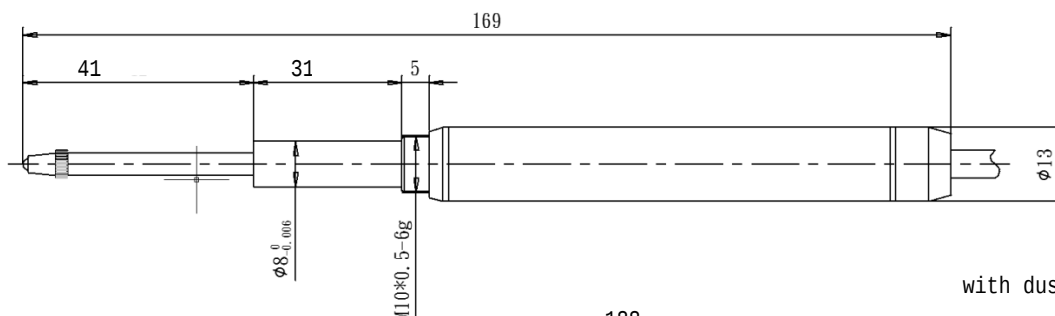
- Anodized aluminum for the outer shell
- Compact size, side head screw M 2.5
- Core material glass grating, high-precision ball-bearing
- counting mode electronic subdivision technology and 4x frequency processing.
- Square wave signal increment A, B, 5V square wave pulse
- Standard electrical connection with 3 meters (MAX=20M) with DB9 male head

Dimensions:

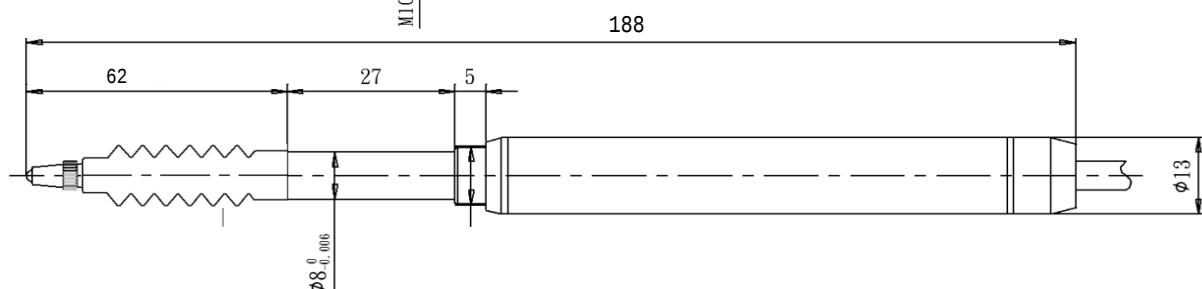
Range 10mm:



Range 30mm: no dust cover

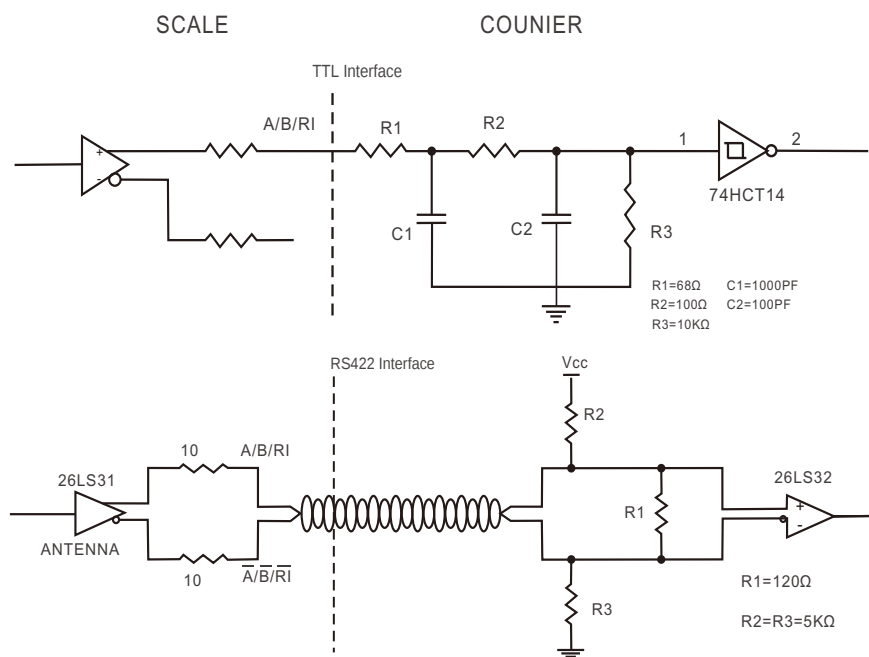


with dust cover

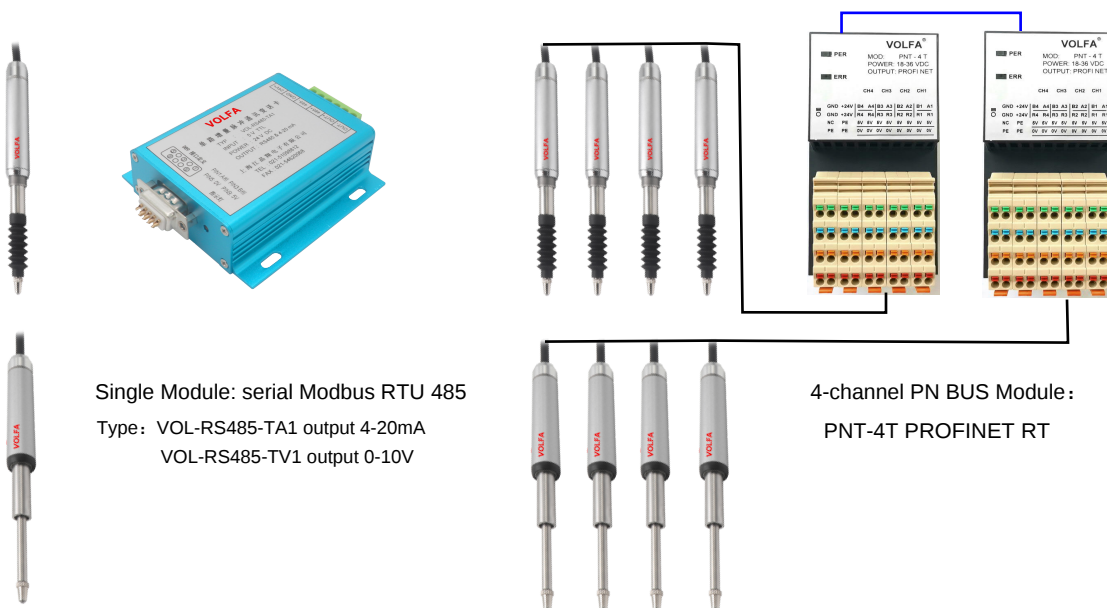


Circuit diagram:

The output signal interface circuit diagram is as follows:



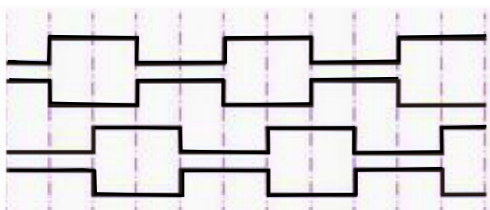
Optional modules:



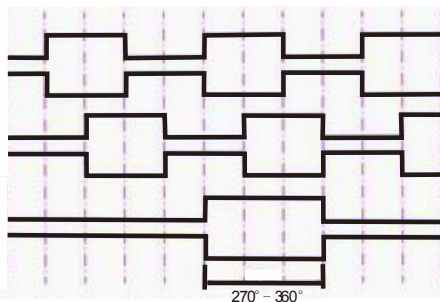
Output wave:

A phase
A inversion
B phase
B inversion

A 相
A 反相
B 相
B 反相



A 相
A 反相
B 相
B 反相
Z 相
Z 反相

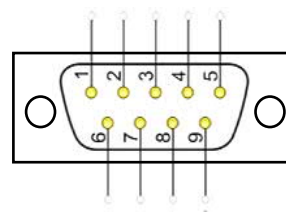


A phase
A inversion
B phase
B inversion
Z phase
Z inversion

RS422 differential signal waveform

Wirings:

PIN NO	Signal	Cable Color
1	5V/24V	red
2	0V	black
3	A	brown
4	B	yellow
5	RI	orange
6	RI	green
7	A	purple
8	B	blue



Note: 9 pin knit mesh, with the shell connection can improve anti-interference ability

Parameters:

Parameter	Unit	Details
Range	mm	10, 30,
Output signal		5 V TTL, 5V differential signal (RS422),
Resolution	um	0.1, 0.2, 0.5, 1, 2 ,
Accuracy	um	± 3
Repeatability	um	±1 unit of resolution
Test speed	MAX	0.3 M/S
Working temperature	°C	-10 - 50
输出TTL电压	%	TTL: H =4.5V 4 mA, RS422:20 mA ,
工作电压	V	5 (± 5%) (≤ 150 mA)
耗电量	mA	60
冲击指数	g	50 (单一冲击) / IEC 标准68-2-27
振动	g	5g / 10-2000HZ / IEC 标准68-2-26
防护等级		IP 54
Working humidity		90% (relative humidity) no condensation
Drive force		<1.5 N
Reference point position		to the end 3mm 7mm none

Instructions:

FCSS	-	X	-	XXX	-	N
系列名 series				标准版 standard version		
分辨率: um				量程范围 mm		
0.1				10 , 30		
0.2						
0.5, 1, 2						
				无: 5V 差分 (5V TTL兼容) 输出线缆标配 3米 带防尘罩		
				NC: 无防尘罩版		
				none: 5V differential (5V TTL compatible) direct 3M cable dust cover served		
				NC: no dust cover		