

TECHNICAL DATA SHEET

Contact-Type Displacement Sensor GFJ series



Figure can vary

Contents

- Product Features
- Application Scenario
- Model Selection
- Size parameter
- Circuit wiring diagram



Performance characteristics

- Working temperature: $-10\sim 40^{\circ}\text{C}$
- Humidity: $\leq 80\%RH$
- Absolute measurement (using grating absolute encoding)
- Waterproof: IP65
- Port output description: Rs485



GFJ series

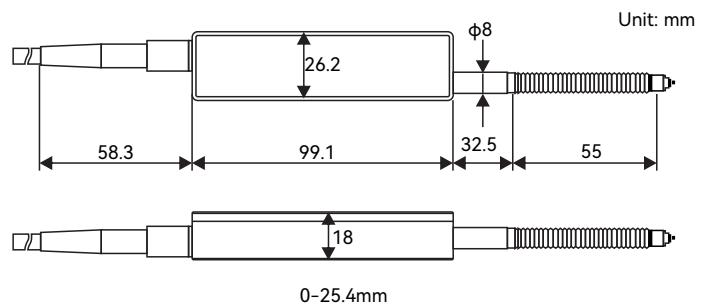
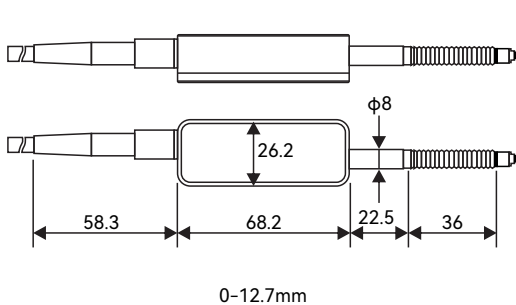
Technical Parameters

Model	GFJ-HA	GFJ-KA	GFJ-WA	GFJ-GWA	GFJ-HB	GFJ-KB	GFJ-WB	GFJ-GWB
Measuring range	0-12.7 mm				0-25.4 mm			
Detection system	Absolute encoding, absolute type (no tracking error)							
Resolution	5 μm	1 μm	0.5 μm	0.2 μm	5 μm	1 μm	0.5 μm	0.2 μm
Accuracy	$\leq 10\mu\text{m}$	$\pm 2\mu\text{m}(\leq 4\mu\text{m})$	$\leq 2\mu\text{m}$	$\leq 1.4\mu\text{m}$	$\leq 10\mu\text{m}$	$\pm 3\mu\text{m}(\leq 6\mu\text{m})$	$\leq 3\mu\text{m}$	$\leq 1.8\mu\text{m}$
Response time	50ms							
Working current	< 50mA							
Voltage	The controller uses a voltage of DC12-24V and supplies a voltage of DC5V to the displacement probe							
Signal output	RS485 level signal							
Communication	Modbus RTU protocol							
Force	Measurement force 1.1-1.2N				Measurement force 1.6-1.8N			
Protection level	IP65							
Temperature	-10 to $+50^{\circ}\text{C}$ (no freezing)							
Humidity	35 to 85% (non-condensing)							
Material	Aluminum alloy; Dust cover: Fluororubber; Probe: Carbide							
Weight	About 71.7g				About 91.5g			

Model Description

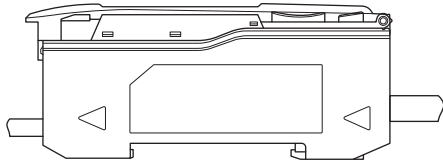
H: Percentage, K: thousand, W: ten thousand, GW: high-precision ten thousand, A: Measurement range 12.7mm, B: Measurement range 25.4mm

Product size/adaptation

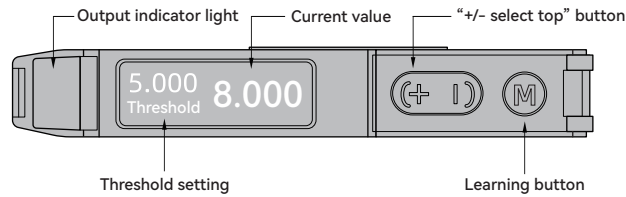


Controller Model: GFJ-01

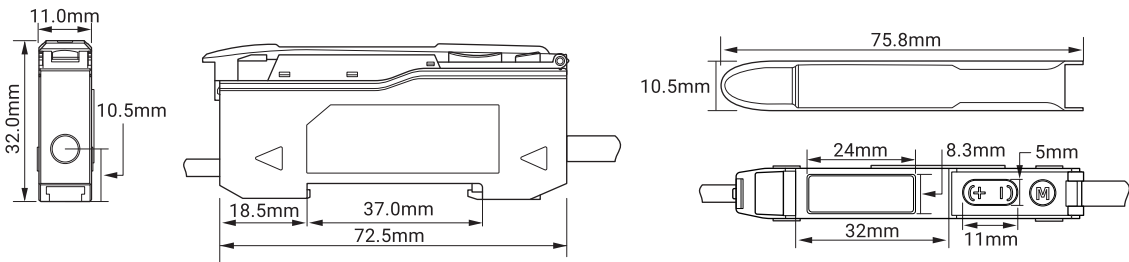
Controller output description: IO output / 485 output



GFJ-01 controller panel

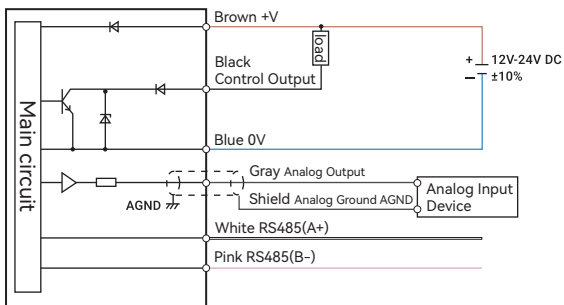


GFJ-01 controller size

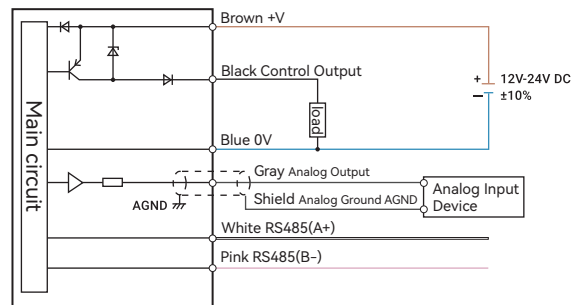


GFJ-01 controller wiring diagram

NPN+RS485+analog



PNP+RS485+analog



Communication protocol

1. Data frame format: RTU, mode communication parameters: baud rate 38400

Data frame: 1 start bit, 8 data bits, no parity check, 2 stop bits

2. The following is the displacement sensor data for reading:

Host query command 01 03 00 00 00 02 C4 0B		Displacement sensor response 01 03 04 01 00 12 39 37 7DH			
Address code	01H	Address code	01H		
Function code	03H	Function code	03H		
Access register First address	00H	Data byte length	04H		
	00H	Data word 1 high 8 bits	01H	Displacement Sensor Data	Flag bit
Data word length	00H	Data word 1 low 8 bits	00H		
	02H	Data word 2 high 8 bits	12H		
CRC (lower 8 bits)	C4H	Data word 2 low 8 bits	39H		
CRC (higher 8 bits)	0BH	CRC (low 8 bits)	37H		
		CRC (high 8 bits)	7DH		

Port Output Description



	Airline Seat (RS232)	Airline Seat (Rs485)
Pin number	Function	Function
1	DC 5V (power)	DC 5-24V (power supply)
2	RXD (data IN)	B
3	TXD	A
4	GND (ground)	GND (ground)