

SGM-PR20

Stainless-steel rod type, IP68



Stainless steel housing with IP68 protection rating, convenient for installation on machine surfaces or in external spaces. analog output 0-10VDC / 0-5VDC / 4-20mA / 0-20mA; digital output RS485 (modbus RTU) / SSI.

Features

Secure and Reliable

Easy to Diagnose

Non-Contact Measurement

Modular Design

Absolute Position Output

Low-Power Design

High-Resolution 16-Bit D/A Analog Output

Repeatability is better than $\pm 0.001\%$ of the full scale

The nonlinearity is less than $\pm 0.01\%$ of the full scale.

Specifications

Output type	
Analog output	0-10VDC / 0-5VDC / 4-20mA / 0-20mA
Digital output	RS485 (modbus RTU) / SSI (on request) (on request)
Performance	
Measuring range	25-7500 mm
Output signal	0-20mA (max/min load 0/500Ω), 4-20mA (max/min load 0/500Ω), 0-10V (min load >5KΩ), RS485 (MODBUS RTU)
Resolution	16-bit DA
Non-linearity	$< \pm 0.01\%FS$ (min $\pm 50\mu m$)
Repeatability	$< \pm 0.001\%$ (min $\pm 5\mu m$)
Update time	<10ms (depending on range); 1ms (1m<range<2m); 2ms (2m<range<3m); 5ms (3m<range<4m)
Operating conditions	
Magnet speed	any
Operating temperature	-40~+85°C
Storage temperature	-55~+85°C
Humidity	90% humidity, no frost forming.

Temperature coefficient	<30ppm/°C
Protection class	IP68
Electrical	
Electrical connection	M12*1 waterproof connector or direct cable exit
Supply voltage	24VDC ($\pm 20\%$)
Current consumption	<60mA (varies with measurement range)
Reverse-polarity protection	Maximum -30VDC
Over-voltage protection	Maximum 36VDC
Insulation strength	500VDC
Mounting	
Mounting orientation	any
Mounting	M18*1.5 or M20*1.5 customer-customized position
Position magnet	Various ring magnets
Materials	
Sensor head	304 stainless steel
Protective tube	304 stainless steel
Mounting flange	304 stainless steel

Orderable range as listed; longer ranges and special temperature or pressure versions on request.

Electrical connection

Analog connector pinout (4-pin)

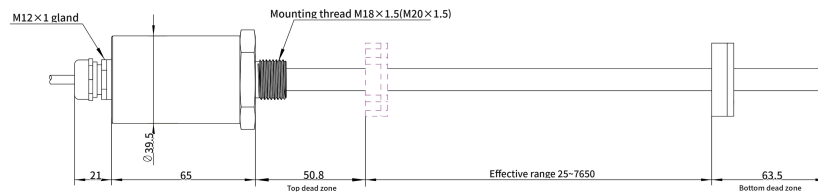
- 1 +12V power supply
- 2 Power - (GND)
- 3 Analog output +
- 4 Analog output -

RS485 connector pinout (4-pin)

- 1 +12V power supply
- 2 Power - (GND)
- 3 RS485-A
- 4 RS485-B

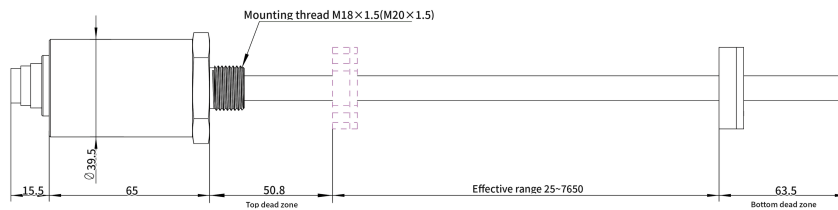
Dimensions (mm)

Direct cable (standard 2 m)



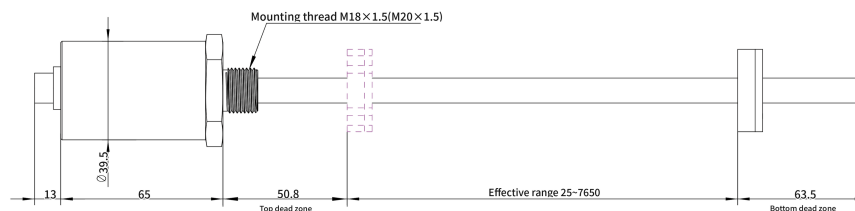
Direct cable

D60 connector



D60 connector, dimensions

M12 connector



M12 connector, dimensions

Range figures in drawings are illustrative; the orderable range is given in the specifications.

Ordering code

SGM-PR20-<mounting>-<range>-<output>-<connection>[-options]

Mounting			
18	M18×1.5	V1R	0–10 V reversed (10–0 V), zero at head
XX	Custom thread	V2F	0–5 V, zero at rod end
Range		V2R	0–5 V reversed (5–0 V), zero at head
00025–07500	5 digits in mm, 5 mm steps	R4	RS485 (Modbus RTU)
Output		Connection	
I1F	4–20 mA, zero at rod end	K12	M12 connector
I1R	4–20 mA reversed (20–4 mA), zero at head	C02 ... C99	Direct cable, number = length in m (C02 = 2 m)
I2F	0–20 mA, zero at rod end	...X	Suffix X: customer-specified cable
I2R	0–20 mA reversed (20–0 mA), zero at head	Options	
V1F	0–10 V, zero at rod end	(none)	Series standard dead zones
		Z1	Short dead zones 30 + 60 mm
		Z9	Customer-specified dead zones

Outputs or options listed in the specifications but not in the ordering code are available on request.

Ordering examples

SGM-PR20-18-00600-I1F-K12 600 mm, 4–20 mA, M12 connector

Specifications are subject to change; final values are confirmed with the order.