

SGM-PE20

Slim external aluminium-profile type



The aluminum profile housing facilitates installation on machine surfaces or in external spaces. Analog output 0-10VDC / 4-20mA / 0-20mA; digital output RS485.

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 / 4-20mA / 0-20mA (dual-channel)
Digital output	RS485
Performance	
Measuring range	25–4000 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	IP67

Electrical	
Electrical connection	Direct cable output or connector
Supply voltage	24VDC (+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	Clamp hole spacing 42.5 mm or 50 mm (select when ordering)
Position magnet	Ring magnet or float

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

Electrical connection

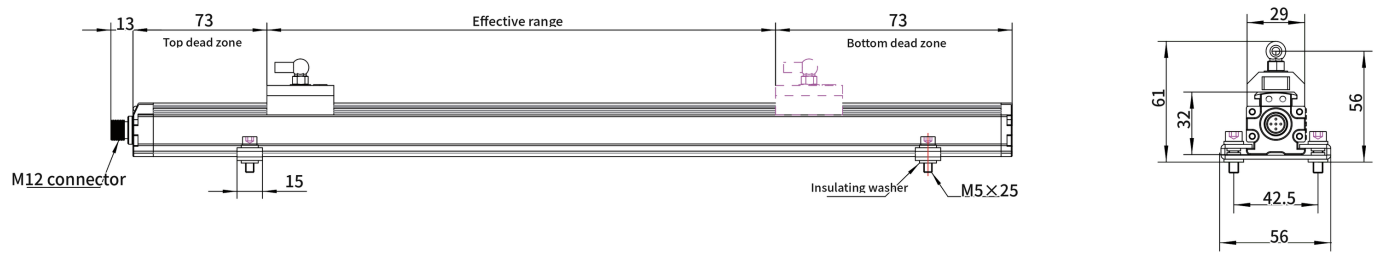
Analog connector pinout (5-pin)

1	+24VDC(-15/+20%)
2	Output 1
3	DC ground (0V)
4	Output 2
5	DC ground

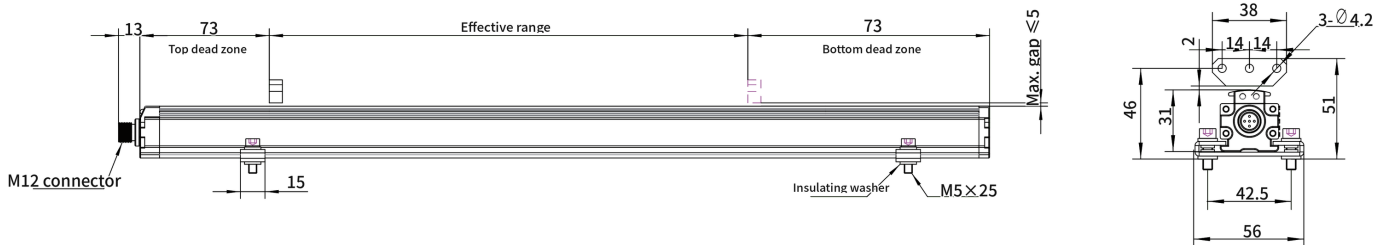
LED status indication

Green on / red off	Normal operation within the effective range
Green off / red on	The magnet is out of the effective measurement range or the magnet cannot be detected.
Green off / red flashing	Enter debugging

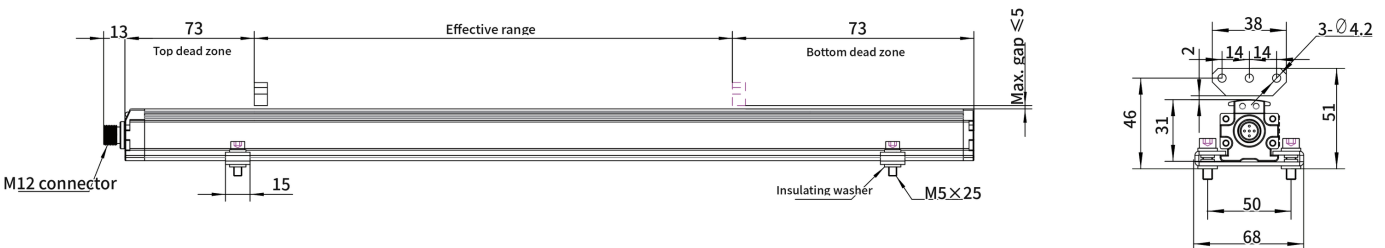
Dimensions (mm)



Dimension drawing 1: rail-type slider magnet, fixing clip 42.5



Dimension drawing 2: floating magnet, fixing clip 42.5



Dimension drawing 3: floating magnet, fixing clip 50/68

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

Ordering code

SGM-PE20-<magnet>-<range>-<output>-<connection>[-options]

Magnet	
MG	Guided magnet
MT	Trapezoid floating magnet
ML	L-shaped floating magnet
Range	
00025–04000	5 digits in mm, 5 mm steps
Output	
I1F	4–20 mA, zero at rod end
I1B	Dual output 4–20 mA + 20–4 mA

V1F	0–10 V, zero at rod end
V1B	Dual output 0–10 V + 10–0 V
R4	RS485 (Modbus RTU)
Connection	
K12	M12 connector
C02 ... C99	Direct cable, number = length in m (C02 = 2 m)
Options	
(none)	Series standard dead zones
Z9	Customer-specified dead zones
B50	Clamp hole spacing 50 mm (default 42.5 mm)

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

Ordering examples

SGM-PE20-MG-00500-I1F-K12 Guided magnet, 500 mm, 4–20 mA, M12 connector

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