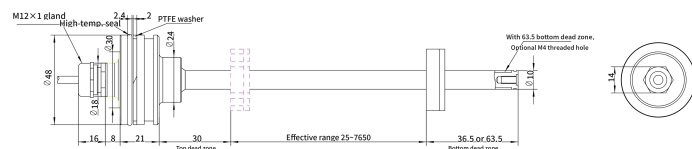


SGM-PF20 **Embedded flange type, $\Phi 48$**



Outline (dimensions in mm)

The embedded type is suitable for use in hydraulic cylinders with limited space. Measuring range 25-4000mm, 35MPa(continuous) 70MPa(peak).

Features

Secure and Reliable – oil- and dirt-resistant

**Easy to Diagnose – LED
real-time status display**

Non-Contact Measurement
– never wears

Modular Design – easy replacement

Absolute Position Output – no re-homing required

**Low-Power Design –
reduces system power
consumption**

High-Resolution 16-Bit D/A Analog Output

Specifications

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 D/A
Repeatability	±0.005mm
Update time	<5ms(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 % PR10, non-condensing
Temperature coefficient	<30ppm/°C
Protection class	IP68

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

Electrical connection

M12 4-pin harness H1 pinout

1	Power
2	Signal
3	Ground
4	Not connected

M12 4-pin harness H2 pinout

- 1 Not connected
- 2 Power
- 3 Ground
- 4 Signal

M12 4-pin harness H3 pinout

- 1 Power
- 2 Not connected
- 3 Ground
- 4 Signal

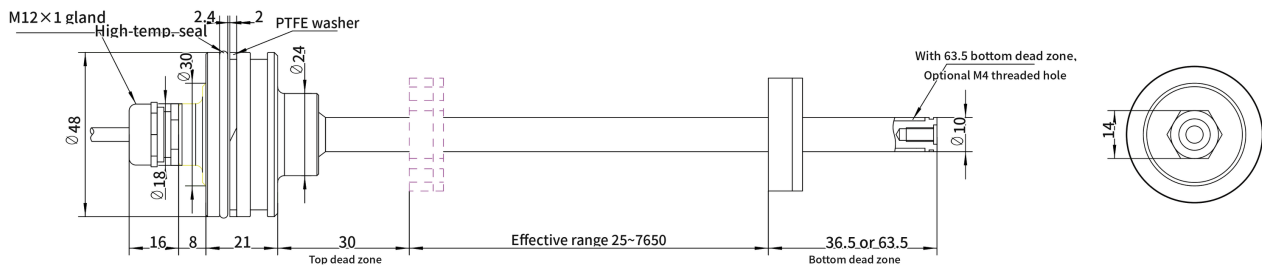
RS485 cable colours

red	Power (red)
black	Ground (black)
yellow	Signal A (yellow)
green	Signal B (green)

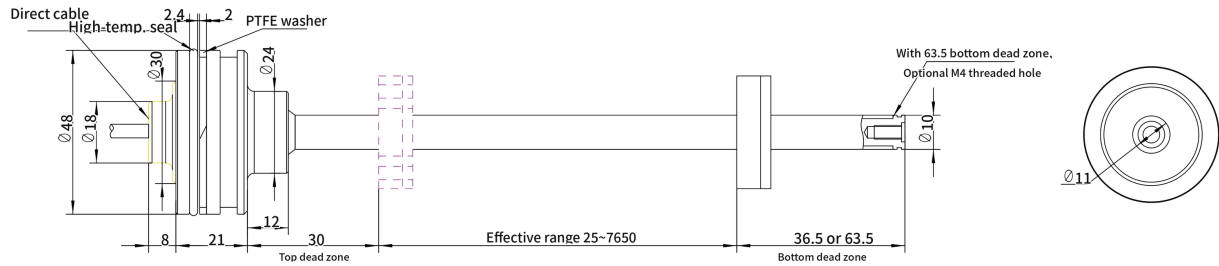
Analog cable colours

red	Power (red)
black	Ground (black)
white	Signal (white)

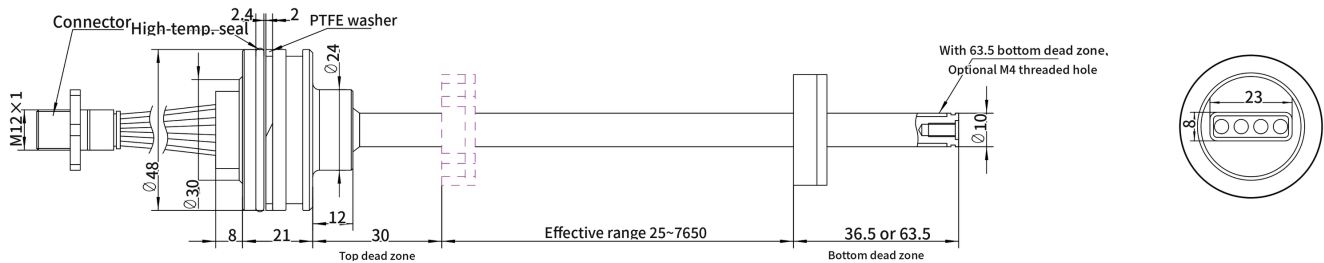
Dimensions (mm)



Technical drawing: M12×1 waterproof gland version, side + end view



Technical drawing: direct cable version, side + end view



Technical drawing: connector

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

Ordering code

SGM-PF20-<tube>-<range>-<output>-<connection>[-options]

Pressure tube			
T07	Pressure tube Φ 7 mm	V4R	0.25–4.75 V reversed (4.75–0.25 V)
T10	Pressure tube Φ 10 mm	V1F	0–10 V, zero at rod end
T10M	Pressure tube Φ 10 mm with M4 end thread	V1R	0–10 V reversed (10–0 V), zero at head
T14	Pressure tube Φ 14 mm (max. 70 MPa)		
Range		Connection	
00025–04000	5 digits in mm, 5 mm steps	H1nn / H2nn / H3nn	M12 IP69K 4-pin harness, pins 1-3-2 / 2-3-4 / 1-3-4; nn = length in cm (06–25)
Output		HTnn	3 flying leads brown-white-green, nn = length in cm
I1F	4–20 mA, zero at rod end	Enn / ETnn	3-core cable / cable with internal-thread gland, nn = length in dm (E10 = 1 m)
I1R	4–20 mA reversed (20–4 mA), zero at head		
V3F	0.5–4.5 V, zero at rod end		
V3R	0.5–4.5 V reversed (4.5–0.5 V)		
V4F	0.25–4.75 V		
		Options	
		(none)	Dead zones 30 + 36.5 mm
		Z1	Dead zones 30 + 63.5 mm

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

Ordering examples

SGM-PF20-T10-00300-I1F-H106 Φ 10 tube, 300 mm, 4–20 mA, M12 harness 6 cm

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