

SS7200 Series speed sensor

Overview



SS7200 series speed sensor includes SS7285 magnetolectric speed sensor, SS7217 single Hall speed sensor and SS7218 dual Hall speed sensor. It is widely used in measuring the speed of various gears and reverse protection. It has the properties of anti-vibration and anti-shock. It can work reliably and long-term in high temperature, humidity and corrosive environments, especially it can meet the requirements of hazardous environments such as explosion-proof. Available in multiple housing lengths, multiple process mounting threads, and electrical interfaces.

Product features

High reliability

Easy for installation

Long service life

Self-powered operation

Easy to align

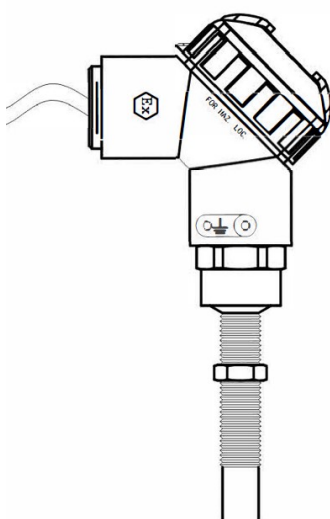
Can be used in most environments

Positive and negative speed measurement/reverse protection

Applications

Pump、 Centrifuge

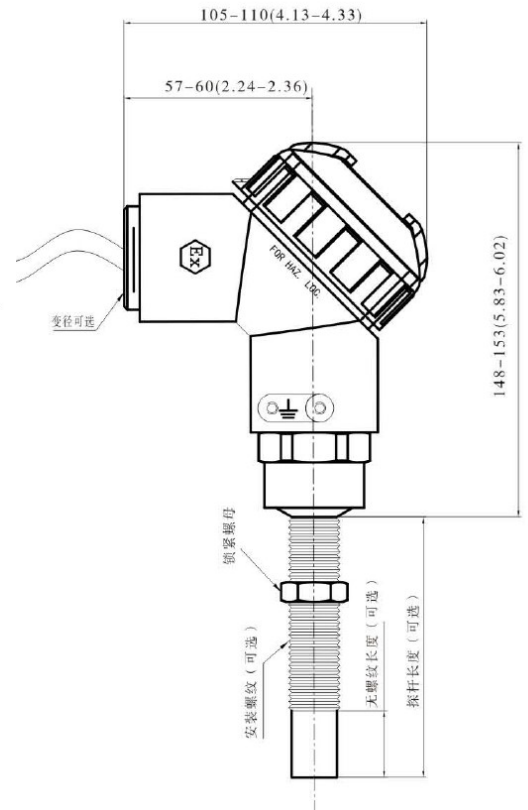
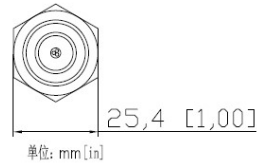
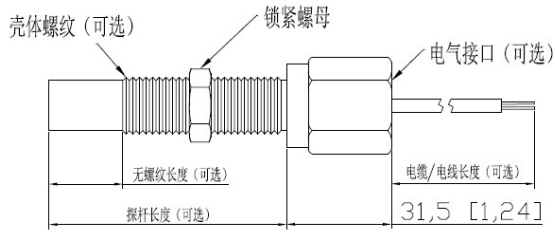
Compressor、 gearbox



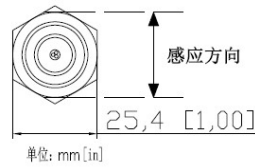
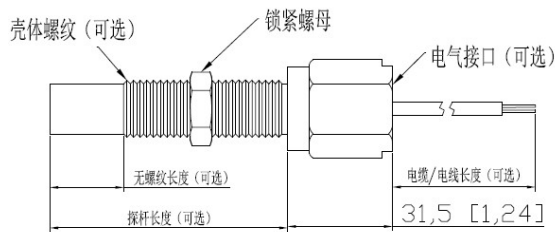
SS7200 Series speed sensor

Dimension plan

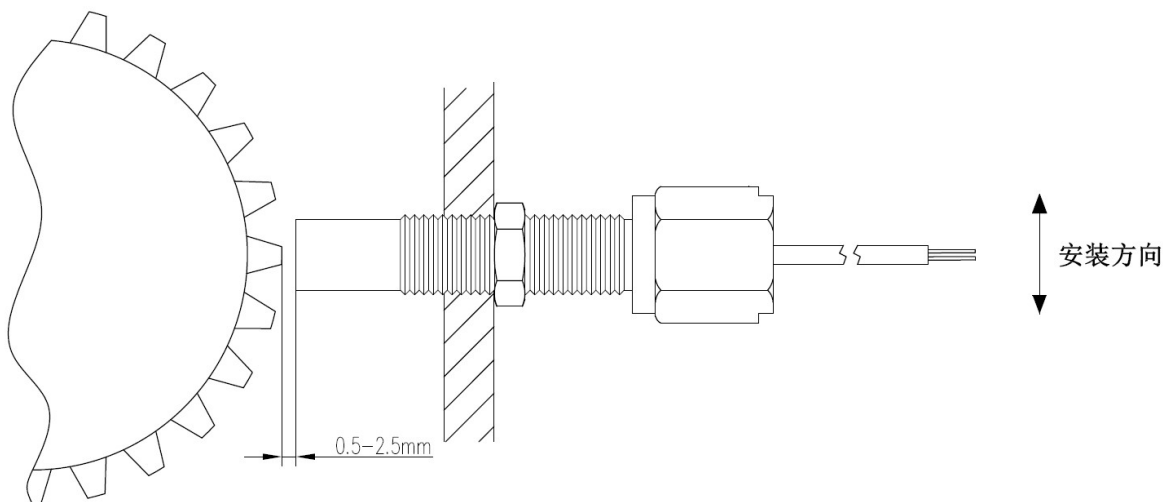
SS7285/SS7217



SS7218



Installation drawing



SS7200 Series speed sensor

Technical specifications

Net weight: up to 400g

Explosion-proof grade: Ex d IIC T4 Gb

Protection grade: IP66

Shell material: NK16

Available in a variety of thread lengths and sizes

(American and metric), cable / wire lengths from 3 to 15 meters.

Frequency response: 0-20kHz

Installation clearance: 0.5mm~2.5mm

ESD protection

V_{ESD}: Max 2kV

Environment

Operating temperature: -55°C~125°C

Storage temperature: -55°C~150°C

SS7285 Magnetolectric speed sensor

DC resistance: 240 Ω max. (reference)

Inductance: 30 mH (reference)

Output polarity: white lead is positive, black lead is negative, green lead is shielded

Humidity: 92%RH@40°C, No obvious corrosion in 90 hours

Cable carrying temperature: 150°C

SS7217/8 Hall speed sensor

power supply

Supply voltage U_s: 4.5~30VDC

Supply current: Max 50mA

Output

Output waveform: square wave

Output voltage HI: U_{HI}=U_s

Output voltage LO: U_{LO}<0.5VDC

Output impedance: 3320Ω

Output current: Max 50mA

Reverse protection: -30VDC

Gear requirements

Gears made of magnetically permeable material (e.g. steel 1.0036)

Best performance

Involute gear

Tooth width≥10mm

Side shift <1.0 mm

Eccentricity <0.2 mm

SS7218: Minimum edge offset of 2 phase shifted square wave signal involute gears: The minimum phase shift of the gears of the modules defined by A and B is 20 °

SS7200 Series speed sensor

Selection Guide

Magnetolectric speed sensor

SS7285-ABB-CCC-DE-FF-GG

A: Thread size

1 5/8-18 UNF-2A

2 M16×1.5 6g

3 3/4-20 UNEF-2A

4 M16×1 6g

BB: No thread length

00 Standard (full thread)

01 Increasing 01=10mm

:

10 longest 10=100mm

CCC: Shell length

040 Shortest 40mm

:

125 longest 125mm

D: Wiring

1 Electrical Interface 1/2 NPT

2 Electrical Interface M20×1.5

3 MIL Connector

4 Integrated EB5016-1/2NPT,1/2"NPT Electrical

Interface

5 Integrated EB5016-3/4NPT,3/4"NPT Electrical Interface

6 Integrated EB5016-M20,M20×1.5 Electrical Interface

E: Explosion-proof grade

1 Safe area

2 NEPSI/CMExC, Exd IIC T4 Gb

3 IEC, Exdb IIC T4 Gb

4 ATEX, II 2G Exdb IIC T4 Gb

FF: Temperature range

01 -65℃~100℃

02 -196℃~240℃

GG: Cable / Wire Length

00 Integrated EB5016, Terminal type

C1 (1m) cable length

:

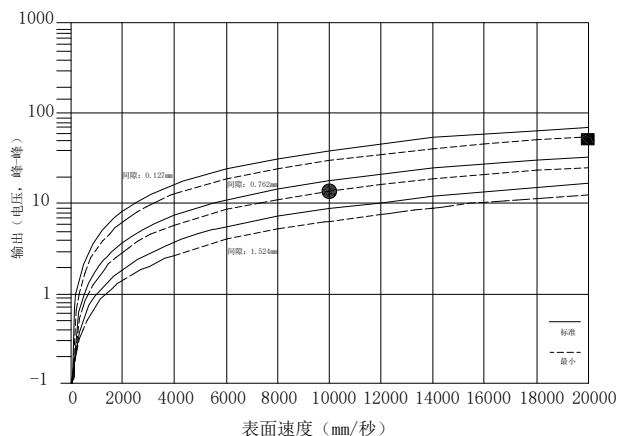
C15 (15m) cable length

W1 (1m) cable length

:

W15 (15m) cable length

Signal mode



■ Output voltage (standard):

54V (P-P)

● Output voltage (guaranteed point):

13.4V (P-P)

SS7200 Series speed sensor

Single Hall Speed Sensor

SS7217-ABB-CCC-DE-FF

A: Thread size

- 1 5/8-18 UNF-2A
- 2 M16×1.5 6g
- 3 3/4-20 UNEF-2A
- 4 M16×1 6g

BB: No thread length

- 00 Standard (full thread)
- 01 Increasing 01=10mm

:

- 10 longest 10=100mm

CCC: Shell length

- 040 Shortest 40mm

:

- 125 longest 125mm

D: Wiring

- 1 Electrical Interface 1/2 NPT
- 2 Electrical Interface M20×1.5
- 3 MIL Connector

4 Integrated EB5016-1/2NPT,1/2"NPT Electrical Interface

5 Integrated EB5016-3/4NPT,3/4"NPT Electrical Interface

6 Integrated EB5016-M20,M20×1.5 Electrical Interface

E: Explosion-proof grade

- 1 Safe area
- 2 NEPSI/CMExC, Exd IIC T4 Gb
- 3 IEC, Exdb IIC T4 Gb
- 4 ATEX, II 2G Exdb IIC T4 Gb

FF: Cable / Wire Length

00 Integrated EB5016, Terminal type

C1 (1m) cable length

:

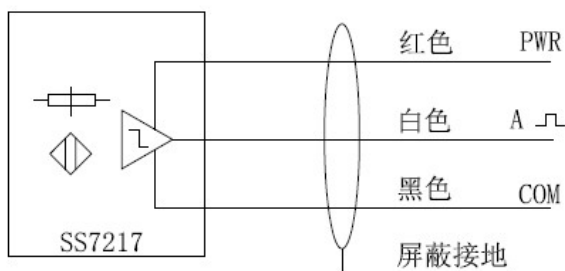
C15 (15m) cable length

W1 (1m) cable length

:

W15 (15m) cable length

Signal mode



Wiring diagram



Waveform

SS7200 Series speed sensor

Dual Hall speed sensor

SS7218-ABB-CCC-DE-FF

A: Thread size

1 5/8-18 UNF-2A

2 M16×1.5 6g

3 3/4-20 UNEF-2A

4 M16×1 6g

BB: No thread length

00 Standard (full thread)

01 Increasing 01=10mm

:

10 longest 10=100mm

CCC: Shell length

040 Shortest 40mm

:

125 longest 125mm

D: Wiring

1 Electrical Interface 1/2 NPT

2 Electrical Interface M20×1.5

3 MIL Connector

4 Integrated EB5016-1/2NPT,1/2"NPT Electrical Interface

5 Integrated EB5016-3/4NPT,3/4"NPT Electrical Interface

6 Integrated EB5016-M20,M20×1.5 Electrical Interface

E: Explosion-proof grade

1 Safe area

2 NEPSI/CMExC, Exd IIC T4 Gb

3 IEC, Exdb IIC T4 Gb

4 ATEX, II 2G Exdb IIC T4 Gb

FF: Cable / Wire Length

00 Integrated EB5016, Terminal type

C1 (1m) cable length

:

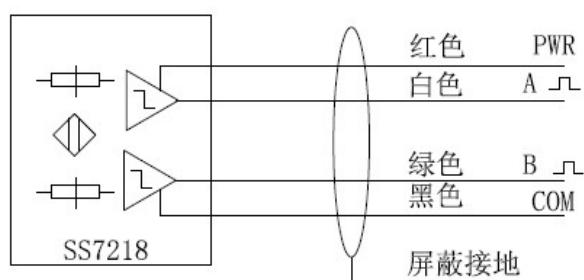
C15 (15m) cable length

W1 (1m) cable length

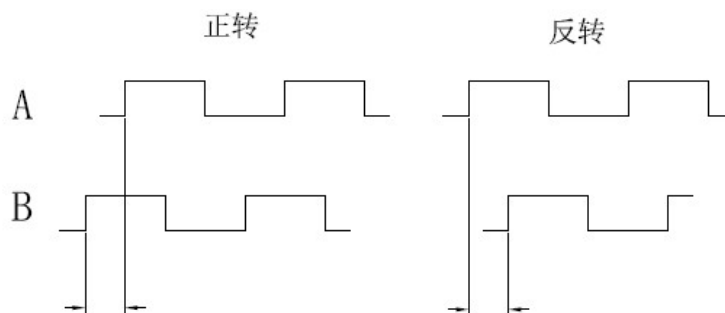
:

W15 (15m) cable length

Signal mode



Wiring diagram



Waveform