

Proximity Signal Condition

8810 Radial vibration

8816 Axial displacement

8818 Speed (key phase)



Overview

The 8800 series single-channel proximity signal conditioners receive a voltage signal from the driver and provide a 4-20mA current output proportional to shaft radial vibration or axial position, powering-24VDC to the driver. This signal conditioner is widely used for monitoring shaft vibration (8810) and shaft displacement (8816) of rotating machinery. This signal conditioner can be used in conjunction with any series and any approaching driver (including Bently 3300XL, Metrix10000, 7200, etc.) from any manufacturer. It can be directly connected to PLC and DCS, completely replacing the old-style frame monitoring system.

8818 is a speed signal regulator, which converts the driver's pulse output into a 4-20mA transmitter signal that is proportional to the speed. It is directly connected to PLC, DCS or other secondary meters to provide you with speed or key phase signals.

The single-channel approaching signal conditioner adopts a digital design and uses a 24-bit ADC and a 16-bit DAC to improve the measurement accuracy. The on-site configuration through the host computer software can correct the sensitivity input from the driver and make the measurement more accurate.

Features

- Powers the driver
- Provides buffered signal via BNC
- Power supply、 completely isolated input/output signal and strong anti-interference ability
- Optional redundant 24VDC power supply, non-polar connection
- Replaces monitor racks and has the programmable function
- With single isolated SPDT relay, software configurable NO, NC and locked and non-locked states
- Software adjustable zero and full scale
- Can be reconfigured by connecting to a computer via USB, and sensitivity can be modified
- Optional base plate mounting or 35mm-DIN rail mounting
- Built-in relay test button (TST) and relay reset button (RST)
- Ex ia II CT4 Barrier certification (Applying)
Ex ia IIC T4 Ga $-55^{\circ}\text{C} \leq \text{Ta} \leq +75^{\circ}\text{C}$
- SIL 2 Safety certification (Applying)

Proximity Signal Condition

Technical specifications

8810/8816/8818

Power supply: 18-30VDC, 80mA

Power for drivers: -24VDC

Input Signal: mV voltage signal from driver

BNC Buffered Output:

-7.87 mV/ μm (-200 mV/mil), 5&8mm probe

-3.94 mV/ μm (-100 mV/mil), 11mm probe

Actual value is based on driver output

Solid state relay:

Operating voltage: 0~±60V (DC or AC)

Max. load current: 1.0A(AC or DC)

Max. pulse load current: 2.4A(AC or DC)

Max. on current: 2.0ms

Max. off time: 0.5ms

Relay alarm status: optional blocking or non-blocking, factory default is blocking

TST Button: Built-in push-button. When this button is pressed, the relay operates, and 4-20mA outputs the current corresponding to the alarm point.

RST Button: Relay reset button

LED Indicator light: Green when normal, when the sensor fails, relay action, probe coil or cable open, probe gap exceeds linear range, and turns red

Measurement accuracy: Signal regulator accuracy \pm 1%, system accuracy depends on driver accuracy

Max. load resistance (R_L): 600 Ω

Measuring range: see selection guide BBB

Isolation: 500V, Between circuit and case

Rated working temperature: -40 $^{\circ}\text{C}$ ~ +80 $^{\circ}\text{C}$

Installation: Standard 35mm-DIN rail installation, also optional base plate installation

Model selection guide

Radial vibration 8810A-BBB

A: Power type

C Single Power Supply

D Double Power Supply

BBB: Vibration Range (4-20 mA)/Mount

001 0-125 μm , Baseplate, pk-pk

101 0-125 μm , DIN- rail, pk-pk

002 0-250 μm , Baseplate, pk-pk

102 0-250 μm , DIN- rail, pk-pk

003 0-500 μm , Baseplate, pk-pk

103 0-500 μm , DIN- rail, pk-pk

004 0-200 μm , Baseplate, pk-pk

104 0-200 μm , DIN- rail, pk-pk

005 0-150 μm , Baseplate, pk-pk

105 0-150 μm , DIN- rail, pk-pk

006 0-100 μm , Baseplate, pk-pk

106 0-100 μm , DIN- rail, pk-pk

Axial displacement 8816A-BBB

A: Power type

C Single Power Supply

D Double Power Supply

BBB: Vibration Range (4-20 mA)/Mount

001 0.5-2mm, Baseplate, pk-pk(5&8mm probe)

101 0.5-2mm, DIN- rail, pk-pk(5&8mm probe)

002 0.5-4mm, Baseplate, pk-pk(11mm probe)

102 0.5-4mm, DIN- rail, pk-pk(11mm probe)

003 0.5-2.5mm, Baseplate, pk-pk(5&8mm probe)

103 0.5-2.5mm, DIN- rail, pk-pk(5&8mm probe)

004 0.5-4.5mm, Baseplate, pk-pk(11mm probe)

104 0.5-4.5mm, DIN- rail, pk-pk(11mm probe)

For single power supply, the alarm relay is standard.

Proximity Signal Condition

Speed (key phase)8818A-BB-CCCCC

A: Power type

- C Single Power Supply
- D Double Power Supply

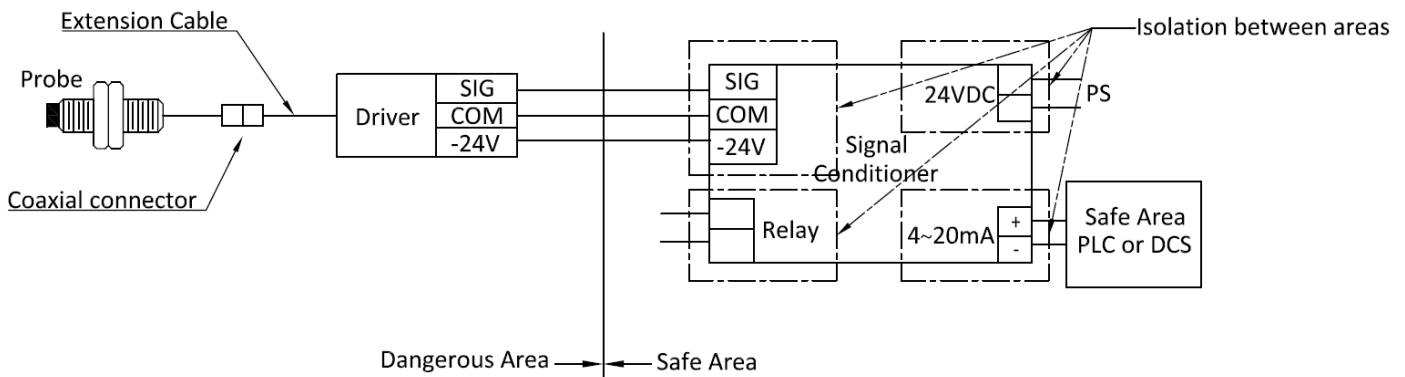
BB: Key Number

- 01 1 keyway (min)
- ⋮
- 99 99 keyways (max)

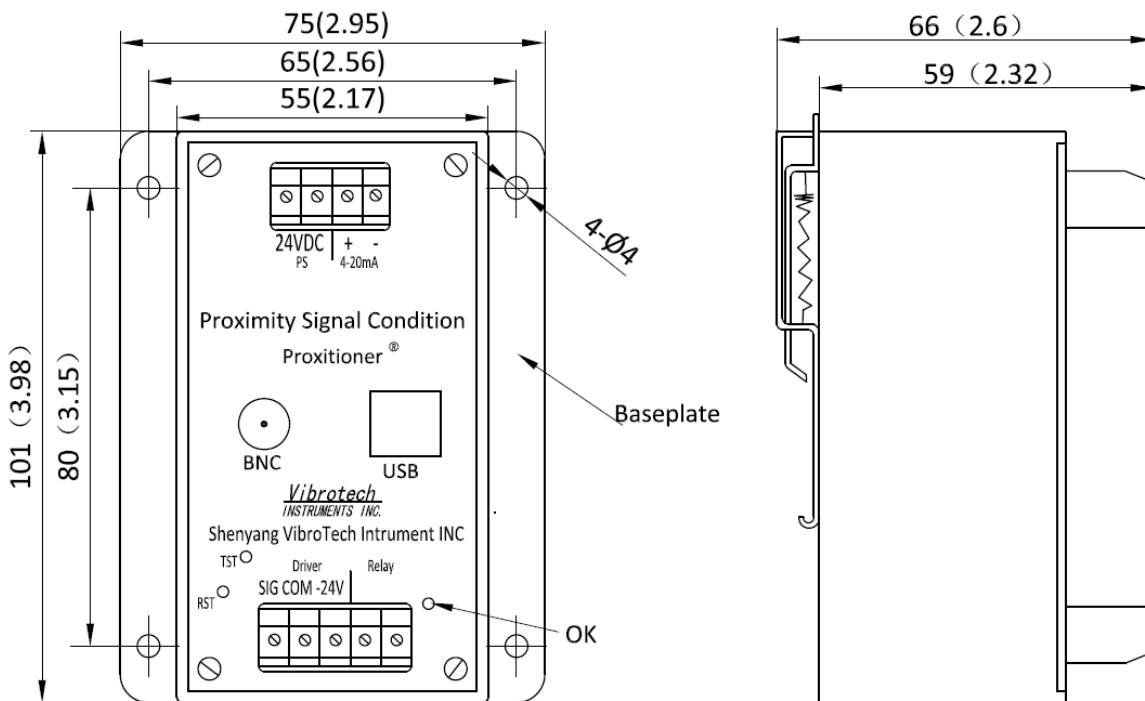
CCCCC: Speed Range

- 120 120rpm (min)
- ⋮
- 100000 100000rpm (max)

Wiring diagram



Dimension plan



Unit:mm(in)