

In-line Refractometer (Concentration meter)

Model : GND



Description

GND series has the function of automatic temperature compensation according to the temperature of the tested medium , when the tested medium temperature changes , the Brix value (soluble solids) after temperature compensation is displays and the output changes accordingly

Working Principle

The concentration sensor is used to measure the concentration of the liquid, and the concentration of the solution is converted into an analog signal output by optical path analysis by different refractive indices of the solutions of different concentrations.

Features

- ◆ Automatic temperature compensation
- ◆ Lightweight , compact and easy to install on site .
- ◆ LED display , easy to connect with other devices for automatic control
- ◆ Easy to operate , only one transmission line solves power and data transmission



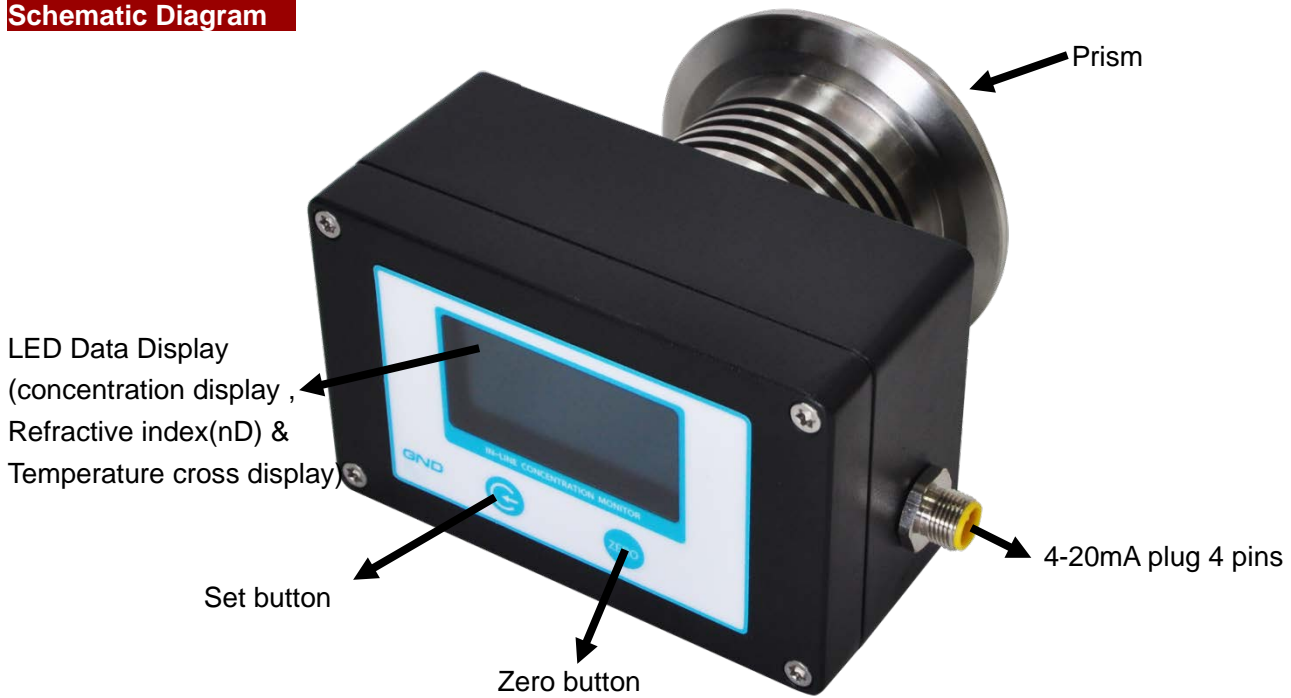
Applications

- ◆ Suitable inline real-time monitoring and control of liquid substance concentration in various industries
- ◆ Cutting oil , mold release agent , quenching liquid , cleaning liquid , emulsion in the machining industry
- ◆ Food , chemical , paper , tobacco , environmental protection

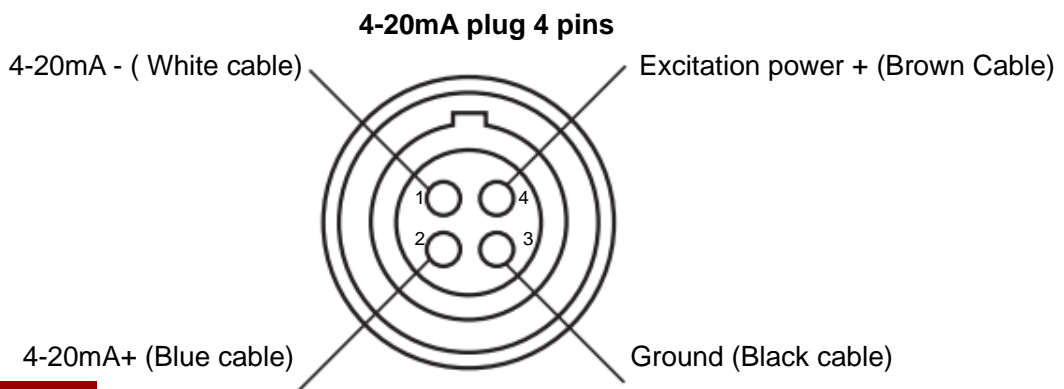
Specification

Model:	GND15 (Brix) ,GND33 (Brix), GND53 (Brix), GND93 (Brix)
Measure Parameters:	Refractive index(nD), Brix, Concentration, Temperature T
Measure range:	0-15% , 0-33% , 0-53% , 0-93%
Resolution Ratio:	Brix: 0.01%, nD: 0.00001
Measurement Accuracy:	Brix: ±0.1%, nD: ±0.0001, Brix: ±0.25%, nD: ±0.0025, Brix: ±0.5%, nD: ±0.0005,
Measurement Temperature:	0-120°C(Automatic Temperature Compensation)
Operating current:	≤200mA
Display menu:	Refractive index(nD) , Brix%, Temperature (° C)
Output :	4-20mA , RS485 optional
Power:	24V DC
Wetted parts material:	Prism: sapphire, Prism stage: SS304 , SS316L (can be customized)
Optical source:	LED(the wave length approximate to D line)
Max Pressure:	1MPa
Environment Temperature:	0-40°C
Protection grade:	IP67
Instrument Size:	120mm*120mm*80mm

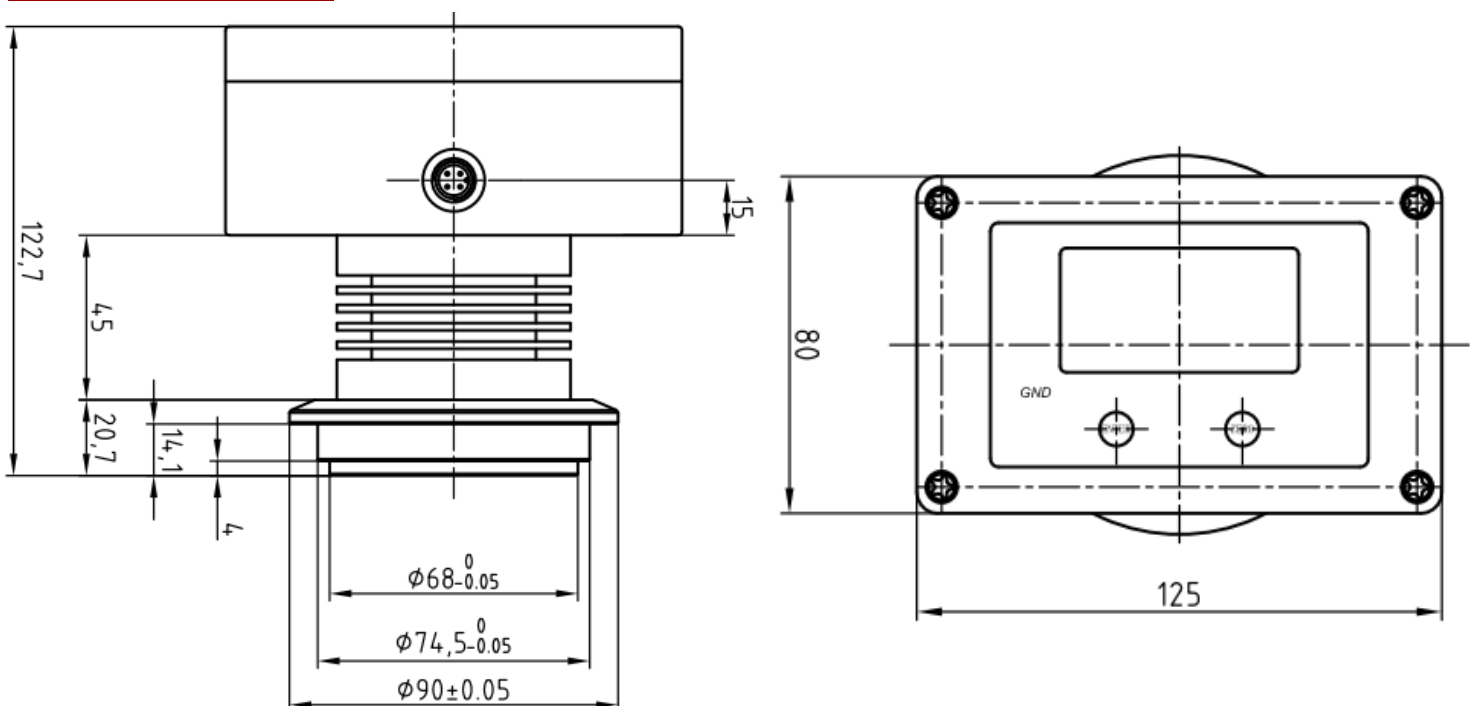
Schematic Diagram



Plug wiring definition



Dimension



Environmental conditions

- ◆ Using temperature shall be between 0~ 40℃
- ◆ Do not put the instrument in a damp place, Maximum average relative humidity: 95% RH (25℃);
- ◆ Atmospheric pressure: 80kPa ~ 106kPa;
- ◆ Places where there is no corrosion or destruction of insulating gas, steam or dust;
- ◆ Use the instrument at altitudes below 2000 meters (altitude).
- ◆ Use the instrument indoor.
- ◆ Do not change the ambient temperature of the instrument suddenly
- ◆ Do not use instrument in areas with large amount dust and strong vibrations
- ◆ Do not put the instrument in low temperature place
- ◆ Do not put heavy objects on the instrument
- ◆ Do not install the instrument In direct sunlight or near the heating source.
- ◆ When installing, please pay special attention to avoid the great impact of the instrument

Breakdowns And Trouble Shooting :

If measurement of concentration transmitter is abnormal, please check input power supply first. If power supply is ok, check if the measurement window of transmitter has been covered by contamination or not, and make sure that measurement window can contact solution well at the mean time. If it is problem of transmitter itself, please return it to the factory for maintenance.

Caution :

- ◆ Protected from direct rain and snow, the packaged transmitter can be applied to various modes of transportation, such as water, land and air transportation.
- ◆ The packaged transmitter can be stored for more than 12 months with temperature ranging from -40℃~ 60℃, and relative humidity less than 90%
- ◆ Live plug-in and pull-out should be strictly prohibited under live working condition, otherwise, it will damage the concentration and infrared transmitter easily.

Ordering Guide with * are required, with --- is optional

Model	Range (%)	Output	Process connection	Electric connection	Accuracy	Other requirement
GND	*	*	*	*	*	---

Example: GND-15-4-20mA-3"clamp- 4pins -0.5%-

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