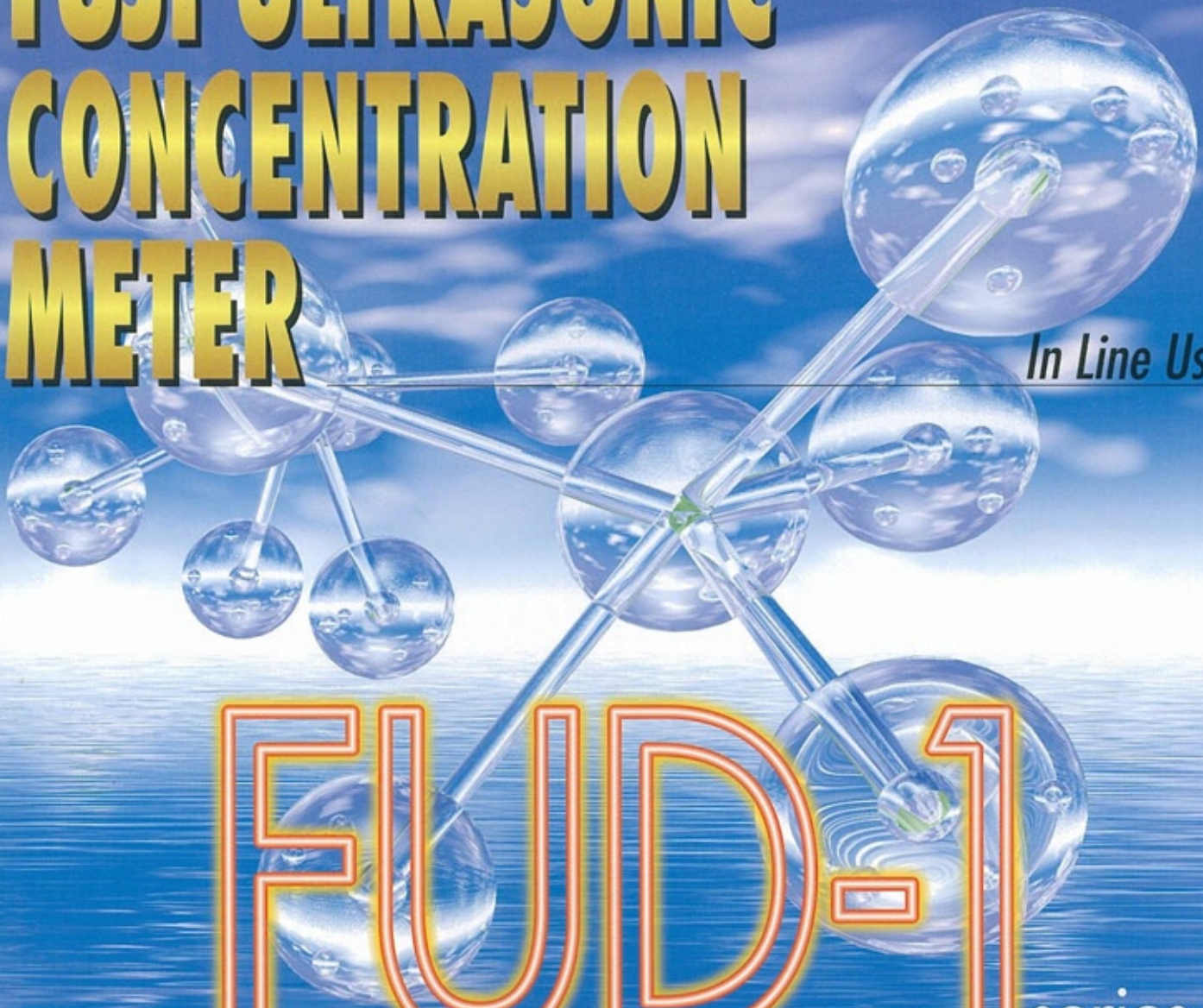
FUJI ULTRASONIC CONCENTRATION METER

In Line Use



FUD-1 series

Model-12 / Model-22 (Explosion Proof Type)
Model-52 / Model-62 (Explosion Proof Type)

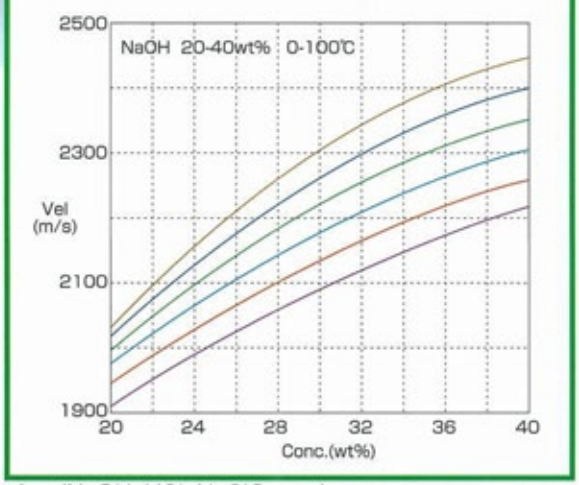
Fuji Ultrasonic Engineering Co., Ltd.

FUD-1 Binary Type Model-12

FUD-1 Model-12

The above picture shows a set of Wall Mount Type trausmitter (with rain proof case) and Flange Type transducer (50A).

Graph of NaOH



Features

- This analyzer measures concentration in real time and controls the concentration systematically by Alarm output and Error output besides the output of the concentration to the indicator, recorder and computer.
- By measuring with ultrasonic waves, our analyzers are not influenced from the circumstances such as vibrations, noises, flow speeds, liquid colours, liquid dusts and so on. Also, our analyzers don't contaminate any solutions, so that it makes the maintenance very easy.
- Our transducers are made from various kinds of materials for good corrosion residence and durability. (SUS316, Tetlon-coated, Titanium, PFA and e.t.c. Please refer to the Specifications for more details.)

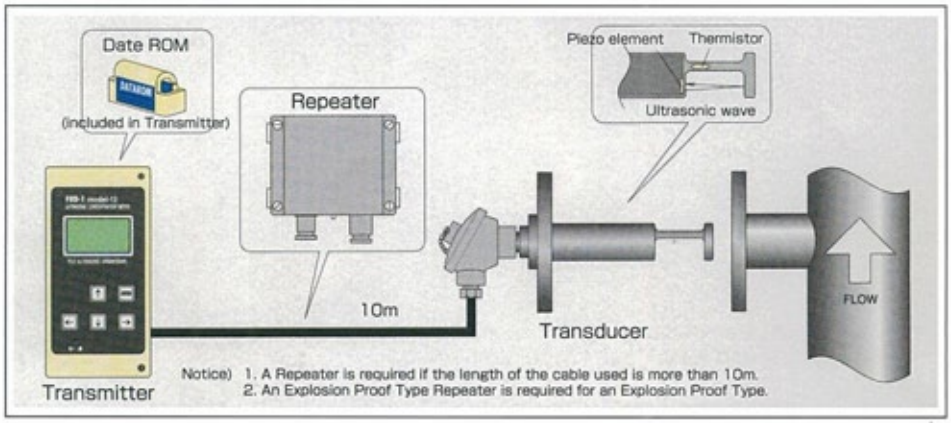
Applications

- Quality control for various chemicals at caustic soda manufacturing companies (NaOH, HCl, NaClO, etc.)
- Quality check for various chemicals at chemical manufacturing companies (H2SO4, NH4OH, HNO3, etc.)
- Concentration control of coolant oil or oil remover at iron and steel companies
- Concentration control of ingredients or oil at chemical fiber manufacturing companies
  We have a lot of experiences including the above applications. (more than 4,000 data as of June '03)
- Concentration control for polarizer(NaOH)
- Concentration control for stripper(MEA in MEA + DMSO)

Principle of measurements

The ultrasonic velocity in a liquid has a characteristic that it is determined by the concentration and the temperature of the liquid. This analyzer measures the temperature and the ultrasonic velocity of the liquid accurately, then calculates the concentration of the liquid from the temperature and the ultrasonic velocity measured by the calibration curves recorded in the Data ROM. In addition, the measurements for different kinds of liquids or different measureing range are available by storing relevant Data ROM for each situation.

※The transmitter has two types of Panel Mount and Wall Mount. Wall Mount Type has two types of with rain proof case and no rain proof case.

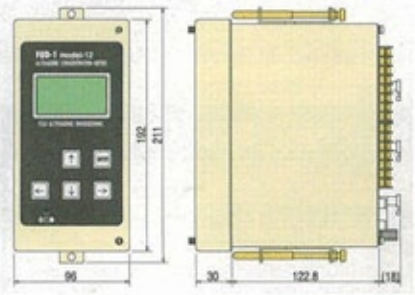


Specifications

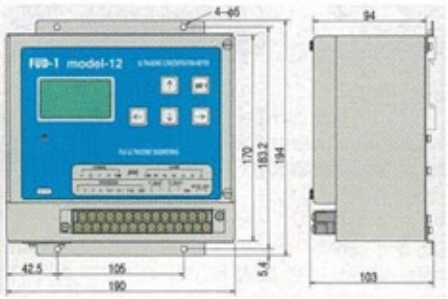
Name FUD-1	FUD-1 Model-12, Model-22(Explosion Proof Type)	FUD-1 Model-52, Model-62 (Explosion Proof Type)
Principle of measurement	Ultrasonic velocity and temperature	Ultrasonic velocity, temperature and conductivity
Display	LCD(concentration·temperature·velocity/various parameters)	LCD(concentration1·concentration2·temperature·velocity ·conductivity / various parameters)
Output	Analog DC4~20mA:(adjustable depend on a concentration figure) Digital RS232C(concentration·temperature·velocity·error code)×2 Alarm high·highest·low·lowest· error	Two Analogs DC4~20mA:(adjustable depend on a concentration figure) Digital RS232C(concentration 1·concentration2 · temperature·velocity·conductivity·error code) ×2 Two Alarms high·highest·low·lowest·error
Power	AC100~240V 50/60Hz, 30VA	AC100~240V 50/60Hz, 30VA
Construction	Panel Mount Type(DIN Standard Type)·Rack Type·Rack Type with a Rain-Proof Case	Panel Mount Type(DIN Standard Type)
Environment	Temp. 0~50℃, RH less than 85% (No dew condensation)	Temp. 0~50℃, RH less than 85% (No dew condensation)
Temp. of liquid	0~100℃, -10~160℃(100℃ span)(Option)	0~100℃, -10~160℃(100℃ span)(Option)
Function	Output setting, Alarm-output setting, Average times setting, Offset and Gain setting, Self-diagnosis-check, Fail Safe Mode, Auto Error Canceration Mode.	Output setting, Alarm-output setting, Average times setting, Offset and Gain setting, Self-diagnosis-check, Fail Safe Mode, Auto Error Canceration Mode.
Option	RS485 Output(Alternative choice with RS232C.) Temp. Output(DC4~20mA)	RS485 Output(Alternative choice with RS232C.) Temp. Output(DC4~20mA)
Channel	max.10ch.	max. 7ch.
Cable	10m(normal), Max. 300m (A Repeater is required for more than 10m.)	10m(normal), Max. 300m (A Repeater is required for more than 10m.)
Explosion Proof Type Repeater	ExⅡ BT4	ExⅡ BT4
Explosion Proof Type Transducer	ExⅡ CT4	ExⅡ CT4
Material of Transducer	SUS316(L), SUS304(L), Tetlon coated, Hasteroy, Titanium, Nickel, Tantalium, PFA, PTFE, PVC, PVDF, etc.	SUS316(L), SUS304(L), Teflon coated, Hasteroy, Titanium, Nickel, Tantalium, PFA, PTFE, PVC, PVDF, etc.

Dimension of Transmitter

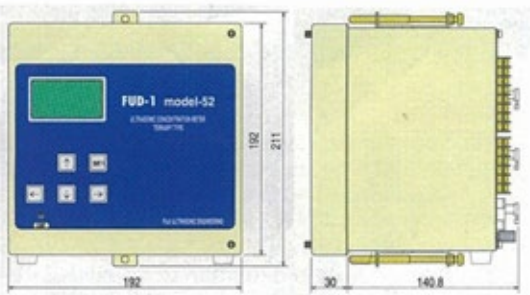
Panel Mount Type



Rack Type



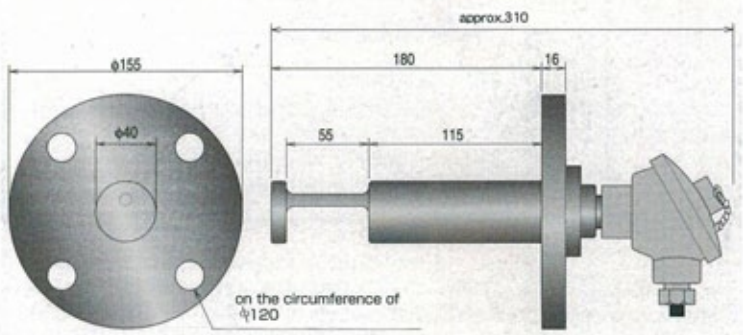
Panel Mount Type



Dimension of Transducer

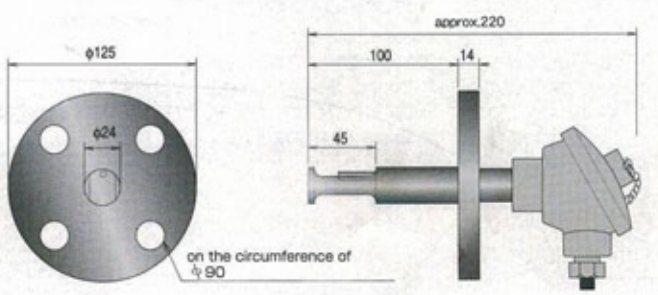
(The figure is defferent according to its material or spec.)

Flange JIS 10K 50A



The Flange Size is based on JIS B 2210 10K 50A FF.

Flange JIS10K 25A



The Flange Size is based on JIS B 2210 10K 25A FF.

Fuji Ultrasonic Engineering Co., Ltd.

1068 Iida-cho, Hamamatsu-city, Shizuoka, 435-0028
Sales Dept.
TEL:81-53-464-6449 FAX:81-53-465-3815

URL http://www.fuji-us.co.jp/ E-mail sag3@fuji-us.co.jp