

# **[Flame-proof]** **ULTRASONIC GAS FLOW METER** **FEx-100**



## **Features**

- Flame-proof Exd II BT6 compliant
- Wider measurement range
- No pressure loss
- Faster response and better reproductivity
- Wide-screen LCD and various display function
- Various output port (analog x2, digital x1, contact x4)



## Product

Name	Model	Unit	Weight	Note
Converter	FEx-100	1	15kg	
Sensor	TS-139	2*	1.5kg/unit	Standard
	TS-359	2*	6.8kg/unit	Large
Cable	JCG-06	2*	0.6kg/cable	6m
	JCG-10	2*	0.8kg/cable	10m

\* is for 1 measurement line. x2 units are required for 2 measurement lines.

## Specification

### ● Pipe

Applicable fluid / Gas (\*1, \*2)  
 Applicable pipe / Nominal diameter : 50mm ~ 4000mm (\*3)  
 Spool piece / Flange rating : JIS 10k Standard (\*4)  
 Material : SGP, STPG, SUS304, SUS316, STPY (\*5)

### ● Sensor

Flame-proof standard / ExdIIBT4  
 Sensor / Standard (screw type) temperature : -30 ~ 180°C  
 Pressure : -0.05 ~ 1MPa  
 Large (frange type) temperature : -30 ~ 180°C  
 Pressure : -0.05 ~ 1MPa

Seal / Gas seal unit

Installation requirement / Straight pipe : Wider than 15D at upstream,  
 wider than 5D at downstream (D is inner diameter)

Cable length / Sensor to converter : Standard 6m or 10m

\*1 : Applicable gas to measure depends on density, temperature, pressure and velocity.

\*2 : Consult sales representative if you have any questions.

\*3 : Consult sales representative if used over 2000mm

\*4 : Consult sales representative if used any franges other than JIS10k

\*5 : Consult sales representative if used any materials other than those above

### ● Converter

Flame-proof standard / ExdIIBT6

Measurement method / Ultrasound transit time method

Measurement line / 1 line or 2 lines (option)

Traverse / Z or V

Accuracy /  $\pm 1.0\%$  FS (flow velocity 5 ~ 60m/s)

Reproductivity / 0.2%

Flow velocity resolution / less than 0.5mm per second

Averaging / Default 10 sec (0.5 ~ 180 sec variable)

Ultrasonic thermometer /

Measure temperature (in case of air) by ultrasound transit time

Ambient temperature / -10 ~ +50°C

Material / AC4A (aluminum cast)

Power supply / AC100V $\pm 10\%$ , 50/60Hz

AC115V, 220V (option)

Surge protection / Built-in surge absorber ( VDD line, signal line)

Power dissipation / Max.27W

Output / Analog x 2

Range : DC4~20mA, isolated

Overrange : DCO~24mA

Load resistance : Less than 450 $\Omega$

Output mode : Flow rate, temperature, pressure

Contact output x 4

Open collector : Rated voltage and current 30V, 0.25A

Output mode : integrated flow rate, alarming, normal

reverse output, upper limit alarming, lower limit alarming

Integrated pulse width : 1.6msec or 50msec

Power supply for pressure and temperature : DC24V $\pm 0.5V$ , 0.2A

Digital output : RS232C, RS422

Input / Temperature : DC4~20mA, Pressure : DC4~20mA

Display / LCD : 128 dot X 240 dot, backlight

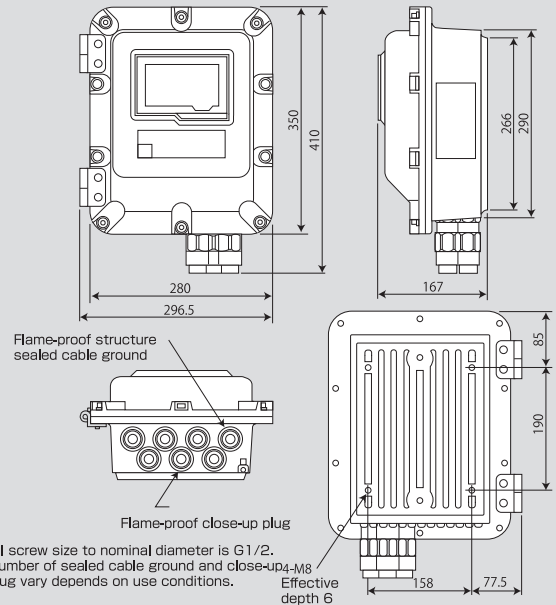
Measurement view : Instant flow rate, integrated flow rate,  
 temperature, pressure

Configuration view : Nominal diameter, temperature, pressure,  
 flow rate range etc.

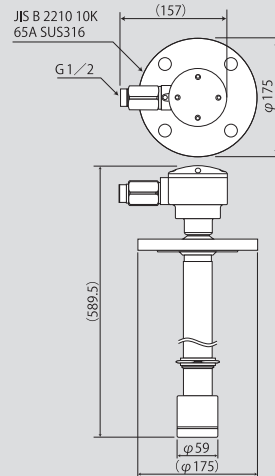
Adjustment view : Zero adjustment, averaging time, low-cut etc.

## Dimension

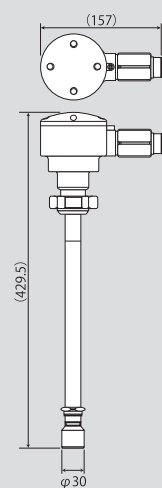
### ● Converter



### ● Sensor TS-359 type



### ● Sensor TS-139 type



**CAUTION FOR SAFETY: Please read surely INSTRUCTION MANUAL before operating**

● Specification is subject to change without prior notice for improvement.



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