Fuji Electric

Innovating Energy Technology

Pressure Transmitters

FCX-AIII Series

Proven Quality and Wide Product Range

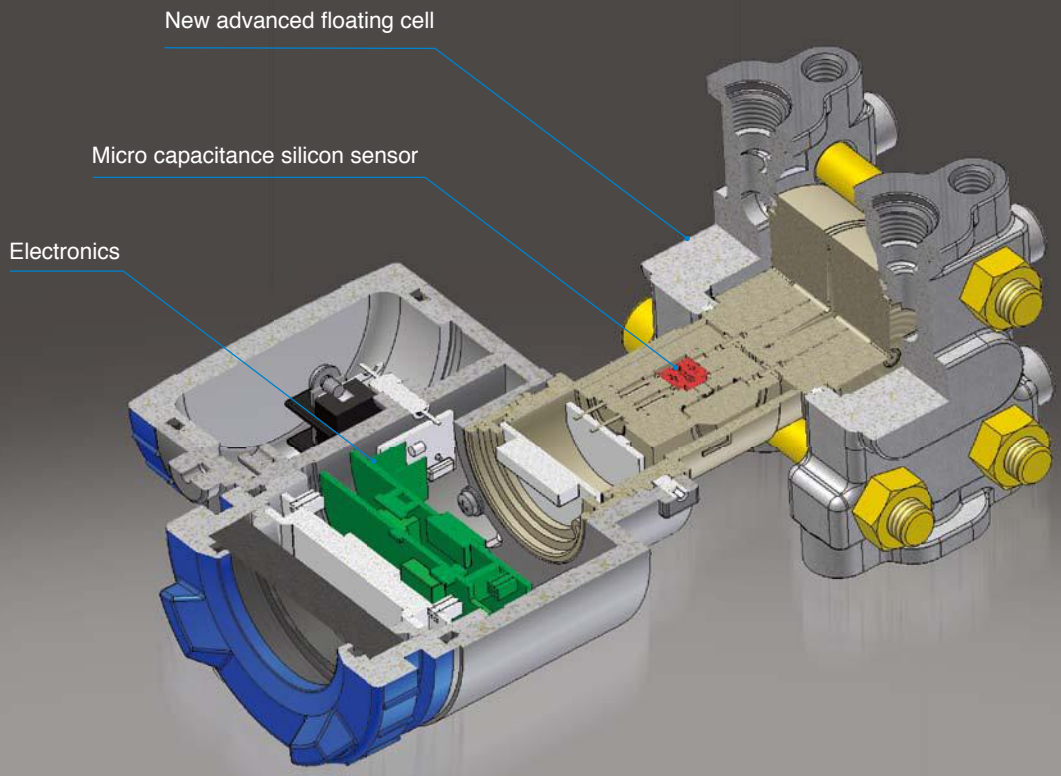
- ☑ High accuracy
- ☑ Superior long-term stability
- ☑ Hazardous approvals

Pressure measurement (Type: FKP, FKH, FKG, FKB)	Level measurement (Type: FKE)	Differential pressure measurement (Type: FKC, FKD)

21A1-E-0020c

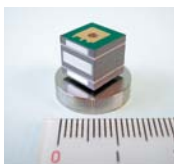
Reliability and Stability

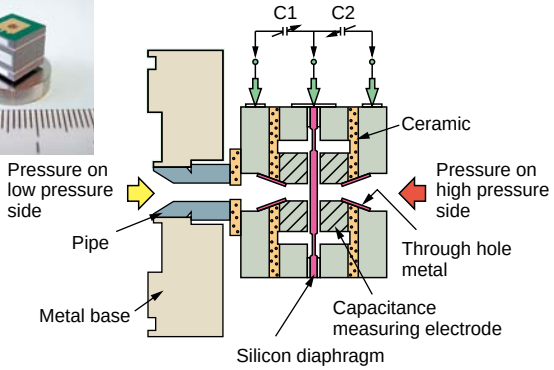
The FCX Series transmitters were introduced in 1989 and have an installed base of more than 1.5 million. The FCX-AⅢ Series is the latest transmitter model demonstrating improved accuracy and long-term stability. The FCX-AⅢ provides superior reliability, simplified user operation, expanded menu structure, and reduced size and weight.



Micro Capacitance Silicon Sensor

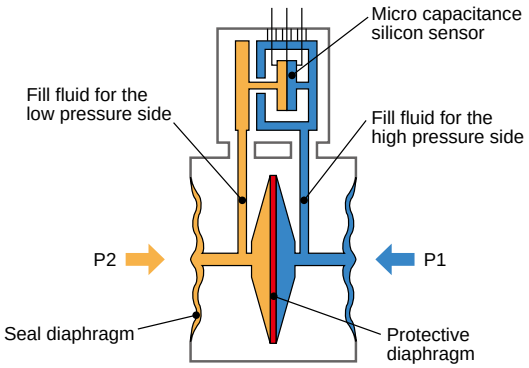
The monocrystal silicon sensor minimizes hysteresis, thereby achieving excellent stability and reproducibility. Optimized structure enhanced the output stability and long-term stability.





New Advanced Floating Sensor

The advanced floating sensor protects transmitters against various severe environmental conditions, assuring stability. The downsized sensor enables easy handling while offering improved temperature effect and static pressure effect, and excessive overload pressure.



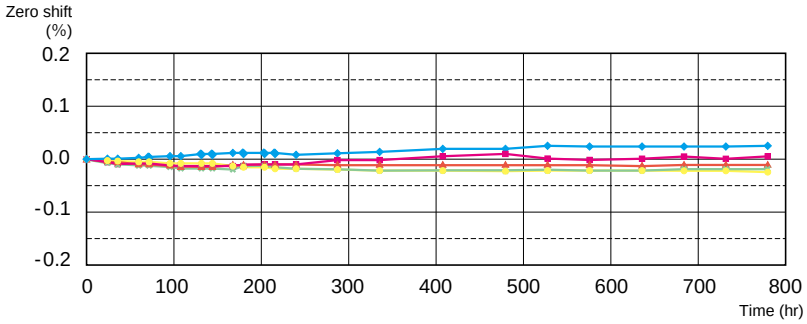
Excellent Performance

High accuracy

Up to ±0.04% (Option) / ±0.065% (Standard*)

∗Applicable even on low differential pressure range (2kPa or lower)

Long term stability : ±0.1% of upper range limit / 10 years

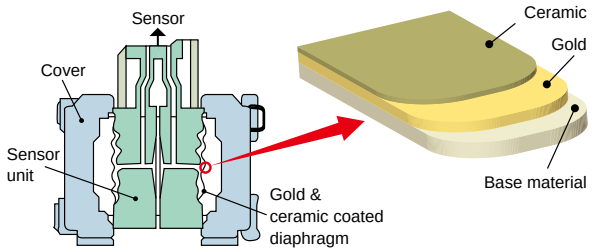


Test data of long term stability
Type: FKC535V5 (Maximum span 130kPa)
Calibrated range : 0 to 130kPa,
Temperature : Room temperature
Quantity of tested unit : 5 units.

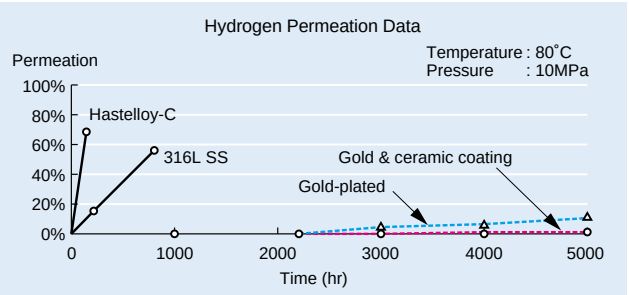
Variety of Diaphragm Materials

Against Hydrogen Permeation: Gold & Ceramic Coating

Double coated seal diaphragm



Hydrogen is the smallest atom element. So, it can penetrate the metal process diaphragms of pressure transmitters, reducing measurement accuracy and a transmitter's lifetime. Since our special seal diaphragm double coated with gold and ceramic significantly suppresses the hydrogen permeation, the transmitter is suitable for desulfurization facilities and hydrogen production units for petroleum refining.



Against Corrosion: Hastelloy, Monel, Tantalum

Selecting the most suitable material releases you from maintenance work.

Application examples

Material	Applications	Material	Applications
Gold & ceramic coating	Desulfurization facility, hydrogen production and supply system, ionized gas (Hydrogen Sulfide)	**Hastelloy-C**	Various organic acid, inorganic acid, alkalis
Tantalum	Hydrochloric acid, sulfuric acid, nitric acid, aqua regia	**Monel**	Alkalis, fluorinated acid
Titanium	Chloride salt, sulfated compound	**Zirconium**	Hydrochloric acid, caustic soda, bleaching agent

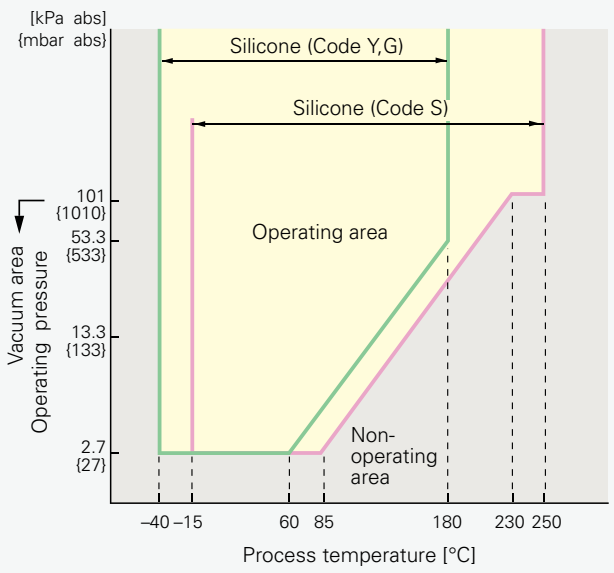
For High Temperature and High Vacuum

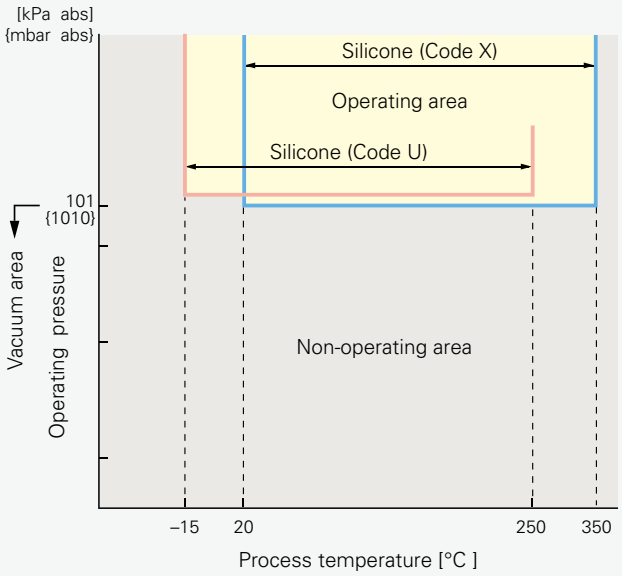
Up to 200°C at 0.27 kPa abs

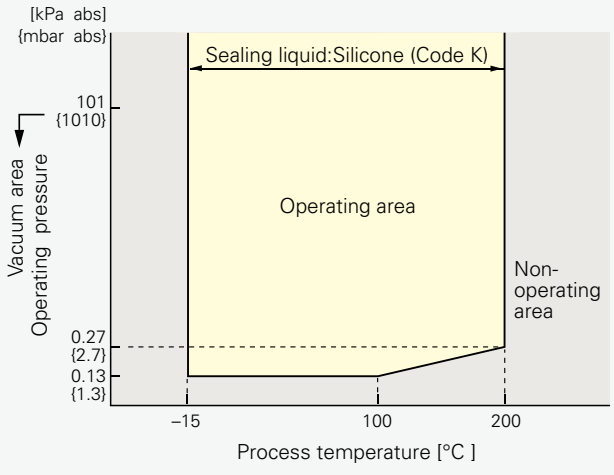
Remote seal type pressure transmitter (FKB)
Remote seal type differential pressure transmitter (FKD)
Level transmitter (FKE)

Our special treatment for remote seal transmitters enables stable measurement even at high temperature and in a high vacuum. To ensure the quality, we apply strict control throughout our production process especially:

- Deaeration of parts at high temperatures and in a high vacuum
- High temperature and vacuum treatment of fill fluid
- Fluid filling at high temperature and in a high vacuum







Housing Selection

L-shape and T-shape housings are compatible for vertical and horizontal pipings.

		L type	T type
1	Differential pressure		
2	Gauge pressure		
3	Gauge pressure Direct mount	———	

Level Transmitter and Remote Seal Transmitter

Level transmitter
(Tye:FKE)

Remote seal type
differential pressure
transmitter (Type:FKD)

Remote seal type pressure
transmitter(Type:FKB)

Approvals

FCX-AIII transmitter is a world-class product which conforms to:

■ HART communication protocol

HART COMMUNICATION FOUNDATION

■ Hazardous approvals (FM, CSA, ATEX, TIIS, IECEx etc.)

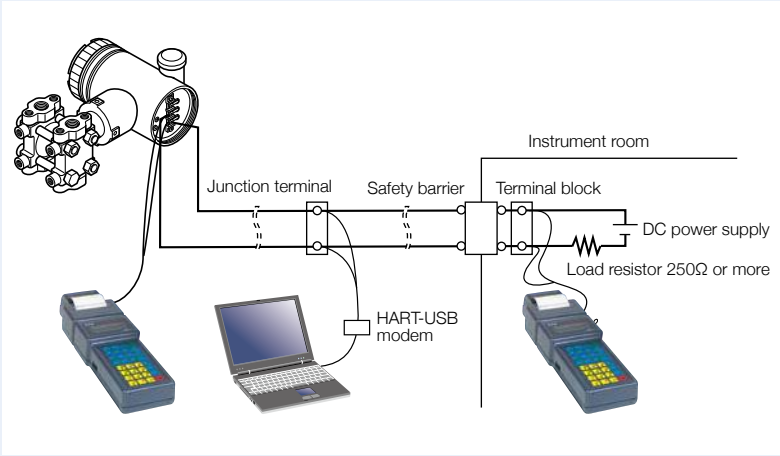
FM APPROVED

※Hand-held communicator FXW is non-compliant with CE marking.

Ease of Use and Maintenance

Communication

FCX-AⅢ Series transmitter supports both Fuji protocol and HART communication protocol without any hardware change. These digital signals are superimposed on 4-20 mA analog output signal of transmitters.

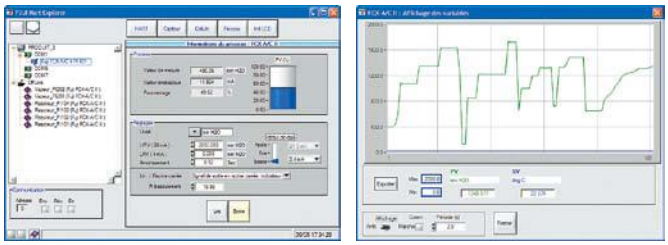


Using the HART communication protocol, the FCX-AⅢ transmitters can be configured by any HART compatible hand held communicators.

The FCX-AⅢ series transmitter can also be configured using HART communication based software installed on your laptop or desktop PC.

- Configuration of parameters
- Range setting
- Process data display and monitoring
- Gathering fault information, diagnosis
- Trend display

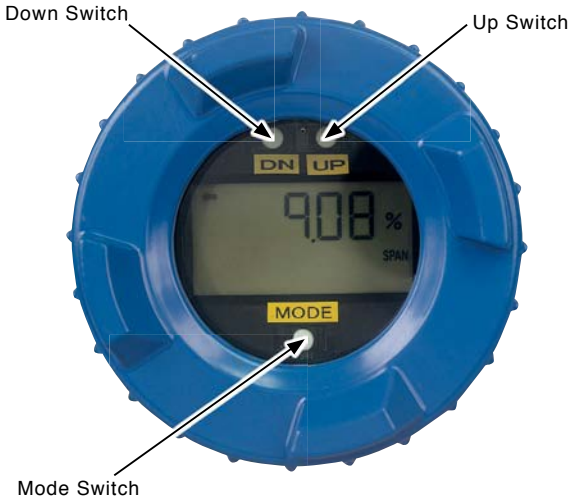
"HART Explorer" PC software (note)screen example;



Note) You can download Fuji Electric France Web site(www.fujielectric.fr).

Field Configurator (Option)

Allows you to configure all the parameters on site without using Hand Held Communicator.



Major Functions
Zero adjustment
Span adjustment
Constant current output (4-20mA)
4mA output calibration
20mA output calibration
Damping
Range
Unit
LCD display setting
External switch lock

Specifications

Type	FKC	FKG	FKA	FKE	FKB	FKD	FKP	FKH
Appearance	 Differential pressure (flow)	 Pressure	 Absolute pressure	 Level	 Remote seal type pressure	 Remote seal type differential pressure (flow)	 Pressure	 Absolute pressure
Maximum span (kPa) [URL]	1 6 32 130 500 3000 20000	130 500 3000 10000 50000	16 130 500 3000	32 130 500	130 500 3000 10000 50000	32 130 500	130 500 3000 10000	130 500 3000
Weight in kg (No indicator)	3.1	2.9	2.9	9-19	4-18	9-19	2	2
Accuracy rating	±0.04% (option)/±0.065% (standard) *Refer to the data sheets for details.						±0.1%	±0.2%
Diaphragm materials	316L SS Hastelloy-C Monel Tantalum 316L SS Gold-plated Gold & ceramic coating		316L SS Hastelloy-C Monel Tantalum	316L SS Hastelloy-C Monel Titanium Zirconium 316L SS Gold-plated			316L SS	
Process connection	Rc1/4			Flange			NPT1/2, Rc1/4, Rc1/2, NPT1/4	
Common specifications	Elevation / Suppression: -100 to +100%URL Span setting range: 1 to 1/100URL Setting interval: 60ms Temperature range: Sensor unit: -40 to +120°C (version for higher temperature available) Electronics: -40 to 85°C Power supply voltage: 10.5–45V DC Output signal / Allowable load resistance: 4–20mA DC/600Ω or less (When 24V DC is applied)				Communication protocol: Fuji protocol or HART protocol Damping time constant: configurable between 0–32 s Zero/span adjustment: by adjustment screws, by optional field configurator, or by HHC. Electric cable inlet: G1/2, 1/2-14 NPT, pg13.5 or M20×1.5 Options: Analog indicator, digital indicator, cleaning for oxygen service, cleaning for chlorine service,stainless housing, stainless tag plate, field configurator			

Hand Held Communicator (HHC)

Type: FXW

- Display: LCD 16 digits, 4 lines
- Weight: Approx. 500g
- Dimensions: 55 × 98 × 223mm

- Printer (optional):
  24 lines print, thermal recording paper

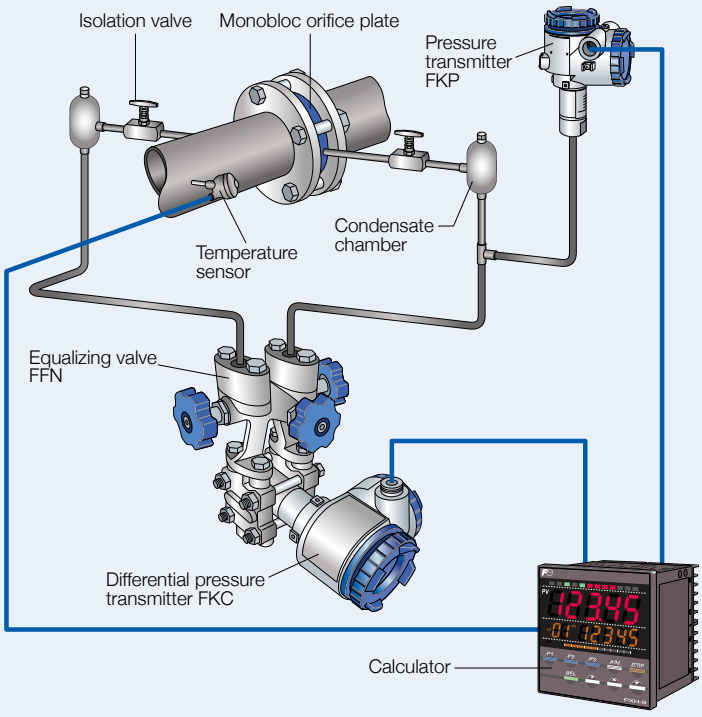
※Non-compliant with CE marking.

Equalizing Valve

Type: FFN

- Compact and lightweight
- Direct coupling type or pressure pipe equipped type

Flow Measurement System Overview



⚠ Caution on Safety

＊ Before using products in this catalog, be sure to read their instruction manuals.

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http://www.fujielectric.com/products/instruments/

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