

# HAND-HELD COMMUNICATOR < HHC >

DATA SHEET

FXW

This instrument is a handy type communicator with built-in battery, being designed to perform facilitated communication with operator through use of "smart" type FCX series transmitter.

## FEATURES

1. **Simple operation**  
Adoption of large LCD display (16 digits x 4 lines) as well as menu assisted software design provides easy-to-use communication interface.
2. **Application to every type of device**  
The communicator can be used with any "smart" type of FCX transmitter, FCX-A/C transmitter, FCX-AII and FCX-C II transmitter.
3. **On-line operation**  
The communicator can be operated without interrupting 4 to 20mA DC signal.
4. **Full variety of protective functions**  
The communicator incorporates transmitter diagnostic function, data-write protection key, battery voltage drop alarm function, automatic power standby function, etc.
5. **Optional printer**  
Set data can be printed on an optional printer.

## SPECIFICATIONS

### Standard specifications

Applicable device: "Smart" type FCX series transmitter

- FCX transmitter
- FCX-A/C transmitter
- FCX-CII transmitter
- FCX-AII transmitter

Transmission line requirement:

- Line length; max 2km (0.75 to 1.25mm<sup>2</sup> cable. For 1km and above, twist pair-cable is recommended.)
- Load resistance;
  - 250 to 578Ω in case of FCX transmitter
  - 250 to 600Ω in case of FCX-A/C, FCX-CII, FCX-AII transmitter
  - (including cable resistance at 24V DC)
- Load capacitance; 0.22μF max.
- Load inductance; 3.3mH max.
- Separation from power line; 15cm or more (avoid parallel wiring.)



- Display unit:** LCD, 16 digits x 4 lines
- Operating unit:** Flat keys (32 keys), power switch, set value protection key switch
- Power source:** Built-in nickel-cadmium battery
- Battery life:** 24 hours (without option under standard conditions after full charge)
- Charger power source:** 100, 115, 230V ±10% AC, 50/60Hz (as specified)
- Charging time:** 5 hours
- Printer (option):** Printing of 24 digits of each remote item
- Ambient temperature:** -10 to +50°C
- Storage temperature:** -20 to +60°C
- Ambient humidity:** 90% RH or less

**Hazardous locations:**

Designed to meet international intrinsic safety standards. Applications have been submitted for the following. (In case of without printer only)

Authorities	
CENELEC FM and CSA	EEx ia IIC T3, T4 Class I, Div 1, Grps A thru D, T3C

Note: Approvals with FCX-AII transmitter pending

### Functional specifications

- Remote function:** See the next page.
- Power alarm function:** Battery voltage drop is detected and indicated by lamp flickering on display unit (Batt ALM).
- Set value protective function:** Set value can be changed by using key switch
- Automatic power standby function:** HHC automatically enters into standby mode when key is not accessed for more than 10 minutes (data measurement only).

**Physical specifications**

Material: Polycarbonate  
 Color: Gray  
 Dimensions (H x W x D): 55 x 98 x 223mm (without printer)  
 Mass: Approx. 500g (without printer)

**Remote functions**

No.	Item	Dis- play	Set	Description
1	Tag No.	○	○	Alphanumeric, 26 digits
2	Type	○	○	Type of device
3	Serial No.	○	—	Serial No. of device
4	Engineering unit	○	○	Setting of engineering unit
5	Range limit	○	—	Display of Max value of range
6	Measuring range	○	○	Measuring range setting, re-setting
7	Damping	○	○	Setting within range of 0 to 32 sec
8	Output mode	○	○	Linear / $\sqrt{\quad}$ output mode selection
9	Burnout direction	○	○	Output direction and value at error Burn out change : hold under scale 3.2 ~ 3.8mA over scale 20.8 ~ 21.6mA
A	Input adjustment	○	○	Adjustment of input value
B	Output adjustment	—	—	Adjustment of output, 4 to 20mA
C	Data measurement	○	—	Data display
D	Self -diagnosis	○	○	Failure in device or amplifier
E	Printer function	—	—	Print-out
F	External switch lock	○	○	External lock of zero/span adjustment
G	Transmitter LCD display setting	○	○	Setting of transmitter LCD display range
H	LINEARIZE *	○	○	Programmable linearization function up to 14 point
I	RERANGE *	○	○	Set range (LRV/URV) calibration function

\*) FCX-A/C transmitter (Amplifier unit version must be more than 24), FCX-AX transmitter and FCX-A II transmitter are available.

**CODE SYMBOLS**

1	2	3	4	5	6	7	8	9	10	Description	
F	X	W						1	A	3	Printer Without With (explosion-proof structure is not applicable)
								0			Charger Without 100V AC 50/60Hz 115V AC 50/60Hz 230V AC 50/60Hz
								1			Explosion-proof structure for hazardous locations Without Intrinsic safety explosion-proof (FM) Intrinsic safety explosion-proof (CSA) Intrinsic safety explosion-proof (CENELEC)  *) Approvals with FCX-A II transmitters pending
								2			
								3			
								A	H	J	
								Y	A		Carrying case Without With
								A			Application General
									3		Use FCX, FCX-A/C, FCX-AX, FCX-A II transmitter (HHC software version 6.0)

**Remarks**

Model: FXW □□□□1-A3 (10th digit: "3") only can operate FCX-A II series.  
 The FCX-A II series cannot be operated with the HHC whose software is older than version 6.0. The version of the HHC software can be upgraded by exchanging the built-in ROM.  
 Contact the nearest Fuji Electric representative when it needs to be upgraded.  
 (The software version can be checked on the screen display which appears when turning on HHC power supply.)

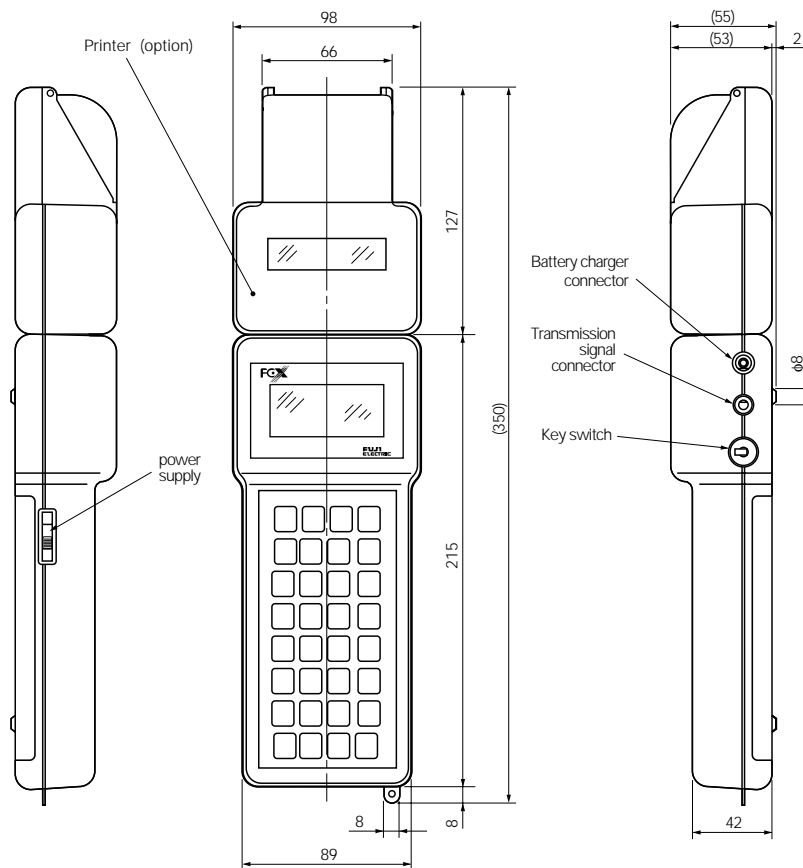
**The product conforms to the requirements of the Electromagnetic compatibility Directive 89/336/EEC as detailed within the technical construction file number TN510414. The applicable standards used to demonstrate compliance are :-**

**EN 55022 : 1994 CLASS A**  
**Conducted and Radiated emissions**

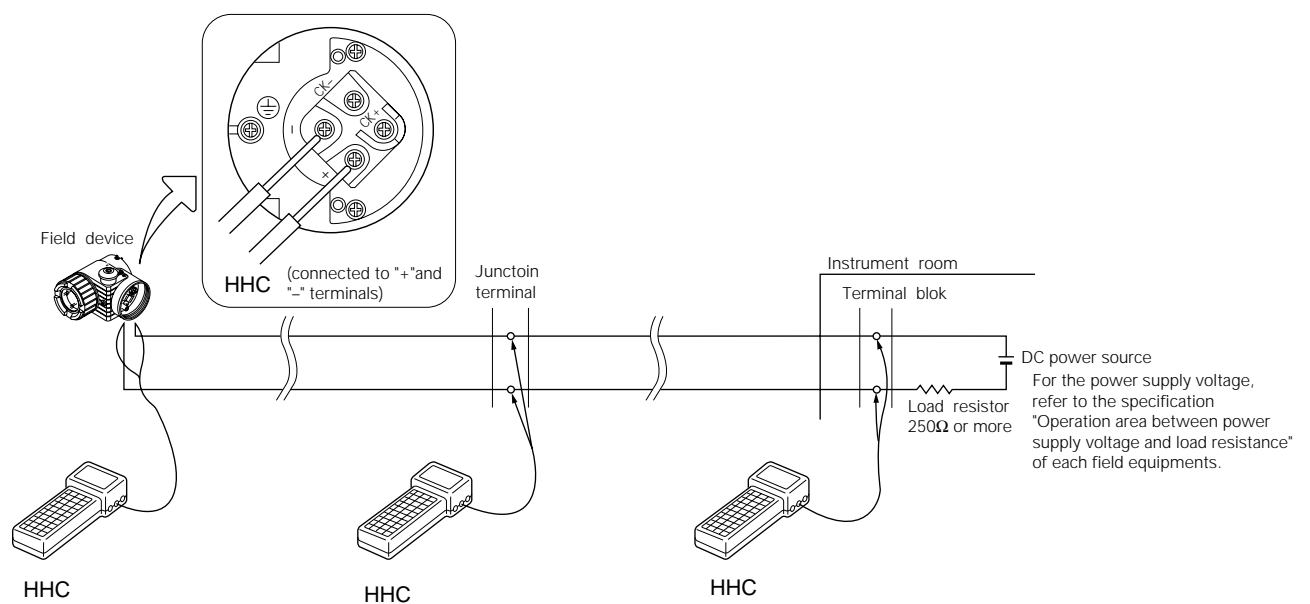
**EN 50082-1 :-1992**      **Radiated immunity, ESD and FBT**

**The key switch dose not meet the Electro-Static Discharge (ESD) test requirements.**

## OUTLINE DIAGRAM (Unit:mm)



## CONNECTION (For example FCX-A/C, FCX-A II transmitter)




## SCOPE OF DELIVERY

HHC, special cable (with clips), keys (2)

## OPTION

Charger, carrying case, printer (based on Code symbols)

 Caution on Safety

\*Before using this product, be sure to read its instruction manual in advance.

---

### **Fuji Electric Co.,Ltd.**

#### **Head office**

11-2, Osaki 1-chome, Shinagawa-ku, Tokyo, 141-0032 Japan  
<http://www.fujielectric.co.jp>

### **Fuji Electric Instruments Co.,Ltd.**

#### **Sales Div.**

#### **International Sales Dept.**

No.1, Fuji-machi, Hino-city, Tokyo, 191-8502 Japan  
Phone: 81-42-585-6201, 6202  
Fax: 81-42-585-6187, 6189  
<http://www.fic-net.co.jp>