

HD DIGITAL METER SERIES

COMMUNICATION MOSAIC INDICATOR

MODEL
HD - GPMS

MODEL & SUFFIX CODE

MODEL HD-GPMS

INPUT

A	RS 485
B	RS 422 (주문사항)
C	RS 232 (주문사항)



ORDERING INFORMATION

Specify code number and variables

* **Code number** : HD-GPMS-INPUT
ex) HD-GPMS-A

* **Special input range** (code O)

GENERAL SPECIFICATIONS

Construction : Mosaic graphic panel flush mounting

Connection : PIN connector

Housing material : black plastic

Input configuration : single-ended

Scaling : microprocessor using
control for key s/w

DISPLAY

LED : 7-segment (H:0.56 Inch), red and green

Number of display digit : 4digit

Scaling factor for process Meter

Zero : 0 -1999 counts

Span : (Zero point) + 9999 counts.

Decimal point position : at key s/w setting

Read rate : 1.2/sec standard

Over-range indication : display by -F

SPECIFICATION

Power : DC 24V $\pm$ 5%

Input Signal : RS - 485 SERIAL

Display : 4 DIGIT LED (H:10.16mm)

Address Selection : POWER TO INPUT

Isolation : POWER TO INPUT

COMMUNICATION PROTOCOL

Communication : SIMPLEX

Baud Rate : 1200, 2400, 4800, 9600, 19200 BPS
(PROGRAM SETTING)

Start Bit : 1 BIT

Data Bit : 8 BIT

Parity Check : NONE

Stop Bit : 1 BIT

Address

Transmission Code : ASCII CODE (HEX)

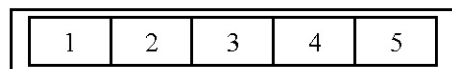
Point : PROGRAM SETTING

Error Time : 1 ~ 55sec, 01 = Infinitely
(PROGRAM SETTING)

PERFORMANCE

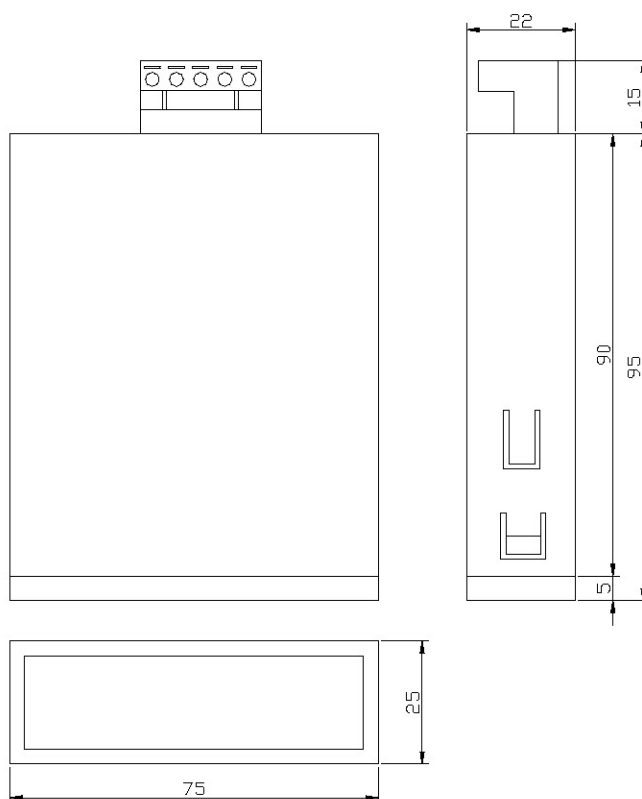
- **Accuracy** $\pm 0.5\%$ of rag ± 2 digit
- **Temp coefficient** : $\pm 0.005\%$ of rag ± 1 digit
- **Line Voltage effect** : ± 1 digit of 10% change
- **Insulation resistance** : 100M Ω or more
with 500V DC
- **Dielectric strength** : 1200VAC 1minute
(Input to power)

TERMINAL CONNECTION



NO1 : +] INPUT NO4 : -] POWER
NO2 : -]
NO2] RESET
NO3]

DIMENSION



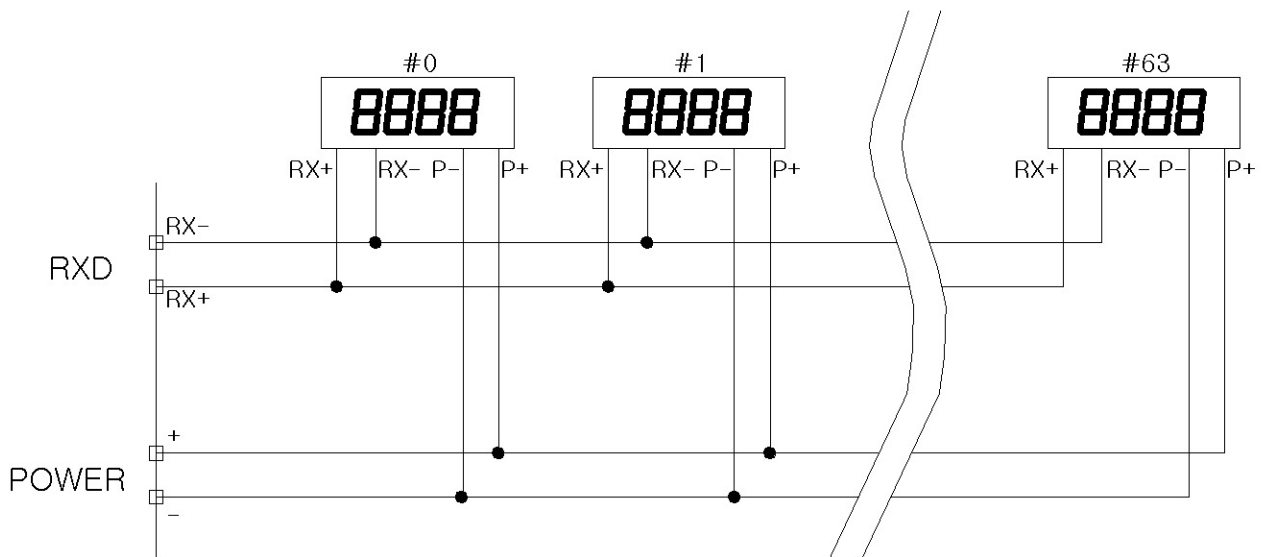
1. HARD WARE ??

- a) CPU : ONE-CHIP MICRO PROCESSOR (ATMEL AT89C52)
- b) COMMUNICATION : RS-422 or RS-485 (RECEIVE ONLY)
- c) BAUD RATE : 2400bps ~ 38400bps
- d) ADDRESS : 0 ~ 999
- e) DISPLAY : RED COLOR STANDARD
 - 4 DIGIT : -999 ~ 9999
 - 6 DIGIT : 0 ~ 999999
- f) PROTOCOL : ?? PROTOCOL
- i) ????: MAX 1.5VA

2. ??

- a) ADDRESS? ????: KEY? ?????? (*Addr*)
- b) BAUD RATE? ????: KEY? ?????? (*bAUr*)
- c) ????: KEY? ?????? (*_dp_*)
- d) SERIAL INPUT가 20sec 이상 검지되지 않을 때 자동적으로 DISPLAY는 CLEAR 된다.

3. INDICATOR 결선 방법

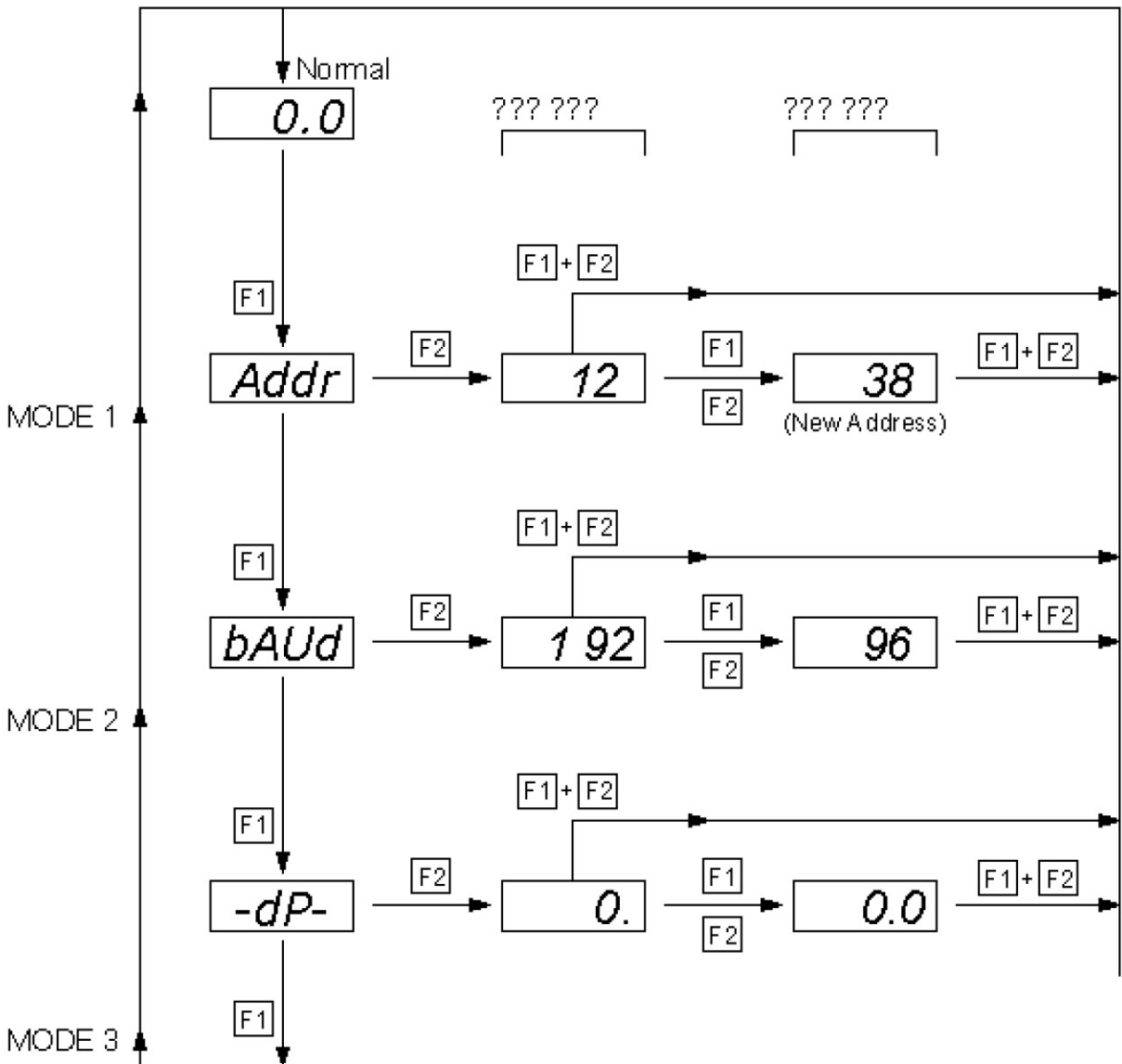


4. KEY SETTING ??

[F1]: MODE ??, ???

[F2]: ENTER, 상태변경

[F1] + [F2]: 저장후 Normal 복귀



a) SINGLE WRITE FORMAT

" ("	10^2	10^1	10^0	") "	POL	10^3	10^2	10^1	10^0	CR
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28H	ADDRESS	29H	(+)2BH	DATA	ODH
	ASCII(30 ~ 39H)		(-)2DH	ASCII(30 ~ 39H)	

ex) 28H 30H 31H 32H 29H 2BH 33H 34H 35H 36H ODH

ADDRESS = 30H 31H 32H = 12

DATA = 33H 34H 35H 36H = 3456

b) GROUP WRITE FORMAT

" ("	10^2	10^1	10^0	" : "	10^1	10^0	") "	POL	10^3	10^2	10^1	10^0
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28H	START ADDRESS	3AH	MAX	29H	(START ADDRESS+0)
	ASCII(30 ~ 39H)		CHANNEL(n)		ASCII
			ASCII		

" ("	10^3	10^2	10^1	10^0	----	POL	10^3	10^2	10^1	10^0	CR
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(START ADDRESS+1)	(START ADDRESS+n-1)	ODH
ASCII	ASCII	

* MAX CHANNEL ≤ 20

ex) 28H 30H 30H 30H 3AH 30H 33H 29H 2BH 31H 32H 33H 34H 2DH 30H

31H 35H 34H 2BH 36H 37H 38H 39H ODH

START ADDRESS = 30H 30H 30H = 0

MAX CHANNEL = 30H 33H = 3

- ADDRESS 0 DATA = 2BH 31H 32H 33H 34H = 1234

- ADDRESS 1 DATA = 2DH 30H 31H 35H 34H = -154

- ADDRESS 2 DATA = 2BH 36H 37H 38H 39H = 16789

a) SINGLE WRITE FORMAT

“ (“	² ₁₀	¹ ₁₀	⁰ ₁₀	“) ”	⁵ ₁₀	⁴ ₁₀	³ ₁₀	² ₁₀	¹ ₁₀	⁰ ₁₀	CR
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28H	ADDRESS	29H	DATA	ODH
	ASCII(30 ~ 39H)		ASCII(30 ~ 39H)	

ex) 28H 30H 31H 32H 29H 30H 31H 32H 33H 34H 35H ODH

ADDRESS = 30H 31H 32H = 12

DATA = 30H 31H 32H 33H 34H 35H = 123456

b) GROUP WRITE FORMAT

“ (“	² ₁₀	¹ ₁₀	⁰ ₁₀	“ : ”	¹ ₁₀	⁰ ₁₀	“) “	POL	³ ₁₀	² ₁₀	¹ ₁₀	⁰ ₁₀
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28H	START ADDRESS	3AH	MAX	29H	(START ADDRESS+0)
	ASCII(30 ~ 39H)		CHANNEL(n)		ASCII
			ASCII		

“ (“	³ ₁₀	² ₁₀	¹ ₁₀	⁰ ₁₀	-----	POL	³ ₁₀	² ₁₀	¹ ₁₀	⁰ ₁₀	CR
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(START ADDRESS+1)	(START ADDRESS+n-1)	ODH
ASCII	ASCII	

* MAX CHANNEL ≤ 15

ex) 3CH 30H 31H 32H 3AH 30H 32H 3EH 31H 32H 33H 34H 35H 36H 36H
35H 34H 32H 31H ODH

START ADDRESS = 30H 30H 30H = 12

MAX CHANNEL = 30H 33H = 2

- ADDRESS 12 DATA = 31H 32H 33H 34H 35H 36H = 123456

- ADDRESS 13 DATA = 36H 35H 34H 33H 33H 31H = 654321