

MYPIN

FA Series Frequency/Line-speed / Tachometer Instruction Manual

Thanks a lot for selecting **MYPIN** products! Before operating this instrument, please carefully read this manual and fully understand its contents. If have problems, please contact our sales or distributors whom you buy from. This manual is subject to change without prior notice.

Warning

Please do not turn on the power supply until all of the wiring is completed. Otherwise electrical shock, fire or malfunction may result.

Do not wire when the power is on. Do not connect the unused terminals. Do not turn on the power supply when cleaning this instrument. Do not disassemble, repair or modify the instrument. This may cause electrical shock, fire or malfunction

Use this instrument in the scope of its specifications. Otherwise fire or malfunction may result.

Caution

The instruments should be installed to avoid strong noise resources. If the signal cable is too long, we would suggest you use shield cables.

Please do not install the signal together with the power.

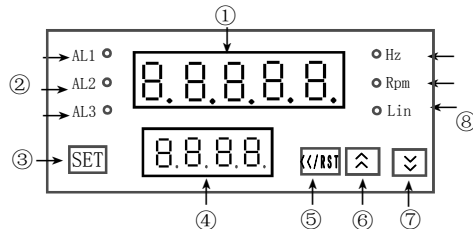
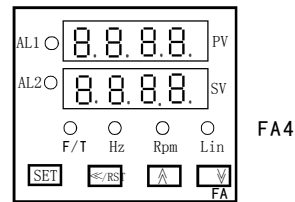
To avoid using the instruments in environment of strong shock or concussion.

To avoid using the instrument in environment of dust or flammable gas.

★ Features

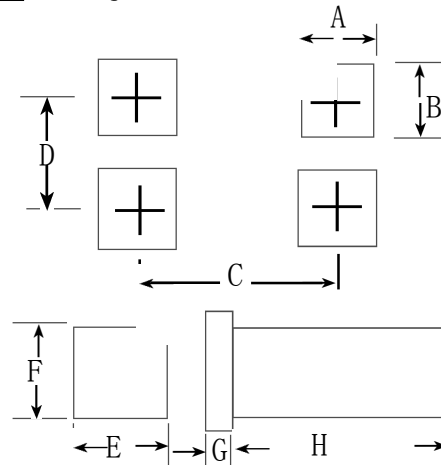
1. Can measure frequency, techo and line-speed
2. 4, 5, 6 digit LED display
3. Use high quality MICROCHIP control CPU
4. Input and output is optical isolated
6. Power fail protection for at least 10 years
7. Widely applied in chemical, machine, light industrial etc.,

■ Name of parts



- ① Measured value
- ② Output indicator lamp for AL1 and AL2
ON: Alarm OFF: No alarm
F/T: on: Frequency, flash: Timer
- ③ Select/Confirm key
- ④ Set value
- ⑤ Shift key
- ⑥ Up key
- ⑦ Down key
- ⑧ Unit indicator lamps.
Hz/H lamp on: Indicate Hz,
Rpm/M lamp on: Indicate Rpm,
Lin/S lamp on: Indicate Line-speed.

■ Mounting and Sizes



Sizes	A	B	C	D	E	F	G	H
FA4 HH4	44.5+0.5	45+0.5	65	65	48	48	8	80
FA7 HH7	67.5+0.5	67.5+0.5	95	95	72	72	12	100
FA8 HH8	91+0.5	43.5+0.5	65	115	96	48	12	100

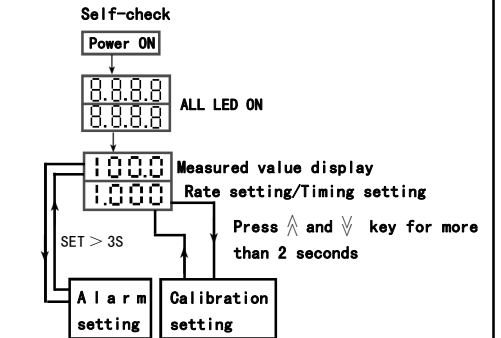
■ Ordering code

FA □ □ - □ □ □ □ □ □ □ □ — Auxiliary power:
 A: 12V B: 24V
 Communication:
 Blank: non 2: RS232 4: RS485
 — AL3: N: Non
 R: RELAY S: SSR/LOGIC T: SCR
 — AL2: N: Non
 R: RELAY S: SSR/LOGIC T: SCR
 — AL1: N: Non
 R: RELAY S: SSR/LOGIC T: SCR
 — Analogue output:
 Blank: Non 1: 0-20mA or 4-20mA
 — Display
 4: 4 digit 5: 5 digit 6: 6 digit
 — Power supply:
 Blank: 90-260V AC 50/60Hz E: DC 24V
 — Size:
 4: 48H × 96W 7: 72H × 72W 8: 48H × 96W
 — FA Series
 Frequency/Line-speed and Tachometer

■ Specifications

Power	90-260VAC or 220V 50/60Hz consumption<5VA
Display LED	0.1-9999, 0.1-99999 depend on digits display
Display range	0.1-9999, 0.1-99999
Measure range	0.01HZ-10KHZ
Accuracy	0.1%FS ± 2digit
Input signals	Pulse, square wave, 5V ≤ H ≤ 30V 0 ≤ L ≤ 2V, up edge contact
Input impedance	≥ 10K Ω
Alarm	RELAY: normal open 250VAC 3A/30VDC 3A COSφ=1
Auxiliary power	DC 24V/15V 30mA max
Withstand voltage strength	≥ 100M Ω (DC 500V Between power terminal and the housing)
Insulation resistance	AC 1500V 1min (Between power terminal and the housing)
Operation environment	temperature: 0-50°C humidity: 35-85%RH
Weight	FA4 (HH4): abt 250g FA7/FA8 (HH7/HH8): atb 350g

■ Parameter setting



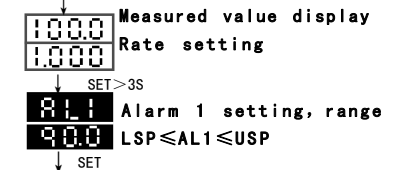
☆ Rate setting steps:

- A: Press \llcorner/RS key, LED flashes and you can shift the digit
- B: Press \wedge \vee key to modify the numerals
- C: Press SET key to confirm

☆ Notice: When the instrument is for measuring frequency, the rate should be set to 1.000. When it is for measuring techo, the rate should be set according to concret applicaiton. When it is for measuring line-speed, the rate should be set according to the measuring unit/pulse. eg. 10 pulse in perimeter of 1m. then you can set it 1-10=0.1m.

☆ Display conversion: In displaying state, press SET to convert. There are 3 data to display: Hz, Rpm, Lin. The relative lamp will on when it's displayed in the low LED.

Alarm parameter setting



SET
Ad1 Alarm 1 mode setting
 H: High alarm
 L: Low alarm

SET
AL2 Alarm 2 setting, range
 LSP≤AL2≤USP

SET
Ad2 Alarm 2 mode setting
 H: High alarm
 L: Low alarm

SET
AL3 Alarm 3 setting, range
 LSP≤AL3≤USP

SET
Ad3 Alarm 3 mode setting
 H: High alarm
 L: Low alarm

SET
PvF Modified value: Display
 value=Measured value-Modified
 value, range=±50.0

SET
LcW Password setting. Range 0-200
 LCK=000, Parameter can be read
 LCK=010, Parameter can be read
 and write

★ Note: The parameters in black color are available for those models with alarm only.

1000 Measured value display
1000 Rate setting

Press Δ and hold ∇ for more than 3 seconds

InP Input signal selection: HE r \square Ln
 stands for frequency/tacho/
 line-speed accordingly

SET
LSP Low display setting,
0.0

SET
USP High display setting for Max
 frequency
100.0

SET
dP Decimal point setting,
 Press <</RST key to shift, Press
 Δ/∇ key to modify and press SET
 key to confirm
00.00

SET
H91 Alarm 1 hysteresis value setting,
1000

SET
H92 Alarm 2 hysteresis value setting,
1000

SET
H93 Alarm 3 hysteresis value setting,
1000

trL Analogue low value setting,
 range: LSP≤trL≤USP,
0.0

SET
trH Analogue high value setting,
 range: LSP≤trL≤USP,
100.0

SET
brd Bit rate setting,
 factory setting is 9.6K Bit/S
0

SET
Ad communication address,
 range 000-200.
000

SET
SFE Frequency measurement process
001 0: 0.01-1Hz, will return 0 after
 100sec.
 1: >1 Hz, will return 0 in 1sec.
 2-5: Average measuring value
 display setting.

SET
ScW Password setting:
 factory setting is 015
015

★ Note: The parameters in black color are available for those models with alarm or analogue only.

Frequency measurement
 setting

Input signal setting Rate setting

Press Δ and hold ∇ key for
InP more than 3
HE seconds, press
 <</RST key to
 shift, press Δ/∇
 key to modify and
 press SET key to
 confirm

49.99 Measured value display
1000 Rate setting

SET
dP Decimal point setting. Press <</RST key
 to shift, press Δ/∇ key to modify and
 press SET key to confirm
00.00

SET
SFE Frequency measurement process:
001 0: 0.01 to 1 Hz, will return "0" after 100 seconds
 1: >1 Hz, will return "0" in 1 second

Press Δ and hold ∇ key for more
 than 3 seconds, it will return to
 measuring estate.

Tacho measurement
 setting

Input signal setting Rate setting

Press Δ and hold
InP ∇ key for
r \square more than 3
 seconds, press
 <</RST key to
 shift, press Δ/∇
 key to modify and
 press SET key to
 confirm

49.99 Measured value display
2000 Rate setting

SET
dP Decimal point setting. Press <</RST key
 to shift, press Δ/∇ key to modify and
 press SET key to confirm
00.00

SET
SFE Frequency measurement process:
001 0: 0.01 to 1 Hz, will return "0" after 100
 seconds 1: >1 Hz, will return
 "0" in 1 second

Line-speed measurement
 setting

Input signal setting Rate setting

Press Δ and hold
InP ∇ key for
Ln more than 3
 seconds, press
 <</RST key to
 shift, press Δ/∇
 key to modify and
 press SET key to
 confirm

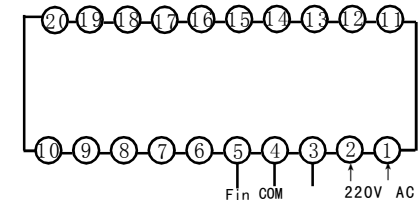
49.99 Measured value display
3000 Rate setting

SET
dP Decimal point setting. Press <</RST key
 to shift, press Δ/∇ key to modify and
 press SET key to confirm
00.00

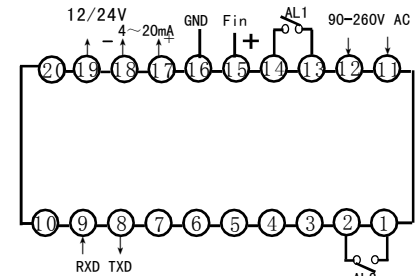
SET
SFE Frequency measurement process:
001 0: 0.01 to 1 Hz, will return "0" after 100
 seconds 1: More than 1 Hz, will return
 "0" in 1 second

Press Δ and hold ∇ key for more
 than 3 seconds, it will return to
 measuring estate.

Terminal configurations



★ Diagram for FA without alarms



★ Diagram for FA with alarms

★(If any changed, please refer to the product showing.)

Device with roller and belt, circumference of roller=0.5cm, sensor is rotary encoder with 10 impulses per rotation.

1. Request meter to display frequency of roller: modulus=0.1(1/10).
2. Request meter to display tacho of roller, modulus=impulse per rotation=10. Tacho=(measuring value+no. of pulse per rotation)*60=(measuring value*60)+10.
3. Request meter to display the speed of the belt, eg. the linespeed per minute, unit meter/minute
 Modulus=(roller circumference+no. of pulse per rotation)=0.0+10=0.05
 Line speed = measuring value*modulus*60s=measuring value*0.05*60=3 (Viz. modulus=3)

User can set and adjust the value of modulus according to the real application.