Photo sensor

PFD-RM□

INSTRUCTION MANUAL

Thank you for purchasing HANYOUNG product.
Please check whether the product is the exactly same as you ordered.
Before using the product, please read this instruction manual carefully.
Please keep this manual where you can view at any time

HANYOUNGNUX CO.,LTD
HEAD OFFICE 28, Gilpa-ro 71beon-gil, Nam-gu, Incheon, Korea
TEL : (82-32)876-4697 FAX : (82-32)876-4696
http://www.hynux.net

PT. HANYOUNG ELECTRONIC INDONESIA
INDONESIA FACTORY JL.CEMPAKA BLOK F 16 NO.02 DELTA SILICON II
INDUSTRIAL PARK LIPPO CIKARANG
CICAU, CIKARANG PUSAT, BEKASI INDONESIA 17550
TEL : 62-21-8911-8120~4 FAX : 62-21-8911-8126

Safety information

Before using the product, please read the safety information thoroughly and use it properly.Alerts declared in the manual are classified to Danger, Warning and Caution by their criticality

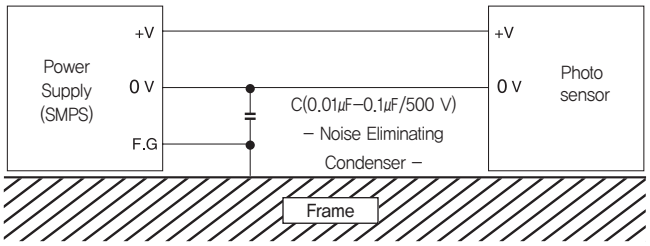
⚠ DANGER	DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury
⚠ WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury
⚠ CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury

⚠ Warning

- The contents of this manual may be changed without prior notification.
- To prevent defection or malfunction of this product, supply proper power voltage in accordance with the rating.
- Since this product is not designed with explosion-protective structure, do not use it at any place with flammable or explosive gas.
- Remove this product while the power is off. Otherwise, it may cause malfunction or electric shock.
- Due to the danger of electric shock, use this product installed onto a panel while an electric current is applied.

⚠ Caution

- If you use the product with methods other than specified by the manufacturer, there may be bodily injuries or property damages.
- Avoid continuously switching the power source On and Off.
- Use a dry cloth to wipe off the substance when cleaning the lens or cases. Never use thinner or organic solvents.
- Do not use this product at any place with much dust, vibration or impact.
- Before inserting power source, make sure that the circuit wiring is properly connected.
- In the case of wiring loaded inductors such as DC Relay and others to output, use diode, varistor and others to prevent surge.
- To avoid malfunction caused by noise, do not put high voltage or power line with sensor wire in a same conduit
- Make its wiring be shorter as possible and wire extension shall be within 30 m.
- Consider the fact that the sensing distance may be varied in accordance with the size, color, surface condition, material, glossy, non-glossy or others of a sensing object.
- Prevent strong disturbance light such as sunlight and others which directly enter into the directional angle of the sensor by putting a glare shield.
- In the case of using multiple sensors (more than 2 sensors), there is a possibility of malfunction caused by mutual interference so, for Through-Beam type, sensors shall be installed in a divergent way or there shall be proper distance between them.
- When using the Switching Power Supply as the power source, earth the Frame Ground (F.G) terminal and be sure to connect the noise-eliminating condenser between 0 V and F.G.



※ If you do not follow the contents described in the safety information then it is possible to be a cause of the product's malfunction so please follow them.

Suffix code

Model	Code			Description
PFD-	□	□	□	Digital fiber sensor
Light source	R			Red LED
Use		G		Normal (Mark)
		M		Multi-functions (MARK/RPM/COUNTER)
External output			N	NPN Open collector
			P	PNP pen collector

※ Multifunction : With built-in RPM/Count function, control output is possible without a separate meter.

Specification

Display		Digit display method
Model	NPN	PFD-RMN
	PNP	PFD-RMP
Power supply voltage		12 - 24 V d.c ±10 %
Current Consumption		50 ㎃ max.
Output	Control	Open collector output, 100 ㎃ (30 V d.c Residual voltage 1 V or less)
	Stability	Open collector output, 100 ㎃ (30 V d.c Residual voltage 1 V or less)
External Input		Teaching / Reset input
Mtensity of light		0 - 1,000
Multi-functions	Counter	400 cps, Up/Down, 0 ~ 9,999
	RPM	12 ~ 9,999 rpm
Output action		Light On / Dark On Output NORMAL , ON DELAY, OFF DELAY, ONE Shot Time Output
On/Off Delay		1 - 9,999 ㎳
OneShotTime		1 - 9,999 ㎳
Light source (wave length)		Red LED / 660 nm
Protective circuit		Built in the reversed power supply connection protective circuit and output short protective circuit
Response time		1 ㎳ max
The Rate of Change		10 % max
LED		7 contacts state indicating LED, 7 segments LED 4 digits
Sensitivity adjustment		Auto teaching / Manual setting by using the set button
Additional Function		Display brightness control function & 180-degree rotating display Display time setting, Zero Reset, Initial Reset, Lock function
Ambient illumination		Sunlight : 10,000 lx max, Incandescent lamp : 3,000 lx max
Ambient temperature		In opration: -10 ℃ ~ 55 ℃, In storage: -25 ℃ ~ 70 ℃ (However, there is nocondensation and freezing phenomena.)
Ambient humidity		35 ~ 85 % RH
Vibration resistance		10 - 55 ㎐ double amplitude 1.5 ㎜, for 2 hours each in X, Y and Z directions
Shock resistance		500 ㎨ 3 times each in X, Y and Z directions
Dielectric strength		Max 1 minute in 1000 V a.c (50 - 60 ㎐)
Insulation resistance		Min 20 ㏁ in 500 V d.c
Connection method		Code extended type, Code length : 2 m, No. of lines : 5P, Thickness : Ø4 ㎜, DIN rail installation structure
Accessory		Mounting bracket

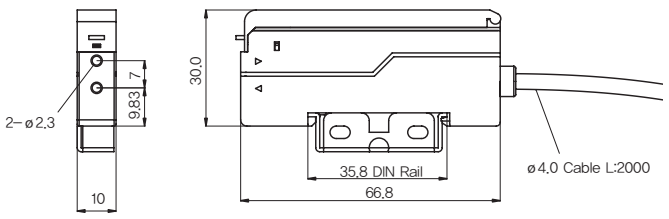
■ Multi-functions

Multi-functions	Counter	• UP / DOWN mode, Free scale 1~999 double, demultiply setting) • Range : 0 - 9,999 • Counting speed : 400 cps (50 % duty) • Output mode : N, F, C, R, K, P, Q, A 8 kinds • External reset : Min. signal width 5 ㎳
	RPM	• Range : 0 - 9,999 rpm • Speed guard output • Free scale : 1 - 1,000 Measring • Cycle setting

Cautions) Use by combining the Fiber Unit in the form of transmission type at the time of Tachometer/Count Measurement.
Malfunction can occur from the increase in the light receiving change range by speed when using for the reflection purpose.
Distance measurement at the optical measurement mode changes in accordance with the Fiber Cable and within 20 ㎜ is recommended.

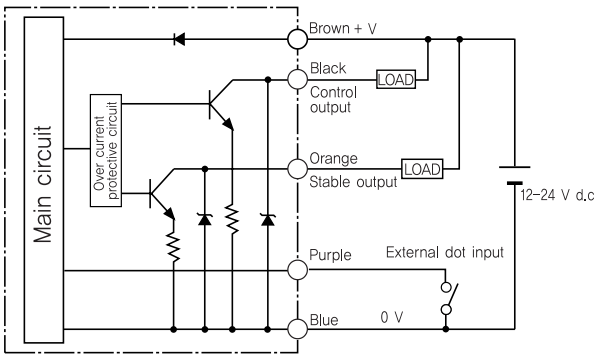
Dimension

[Unit : mm]

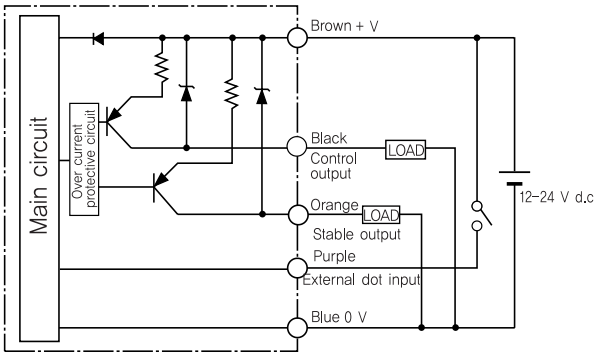


Connection diagram

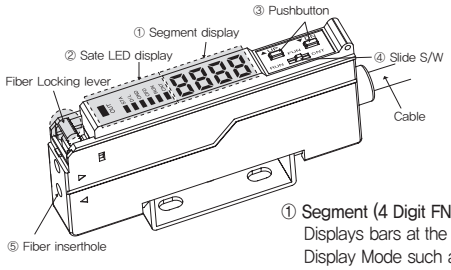
■ NPN



■ PNP



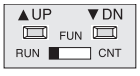
Name of parts



① Segment (4 Digit FND) Display
Displays bars at the Number, Letter, and Bar Display Mode such as the amount of light entering, mode error message, set up, values, and set up items

② LED Display (State)
Displays the state of Fiber Sensor
- ●OUT : Lights on for interface output (OUT1)
- ●STB : Displays safe regions at the RUN Mode (OUT2)
  Sensor input display is on over the set up region at the RPM/Count Mode
- ●D/L : Lights on for Light On and Lights off for Dark On
- ●ON : Lights on when On Delay is set at the Output
- ●OFD : Lights on when Off Delay is set at the Output
- ●RUN : Lights on when operating at RUN
- ●CNT : Lights on when operating at CNT (Up Counter / Down Counter / RPM)
  (RUN and CNT simultaneously light on when operating at the RPM Mode)

③ Push Button (▲UP, ▼DN)
Function change and value set up at each executive mode (RUN, FUN, CNT)



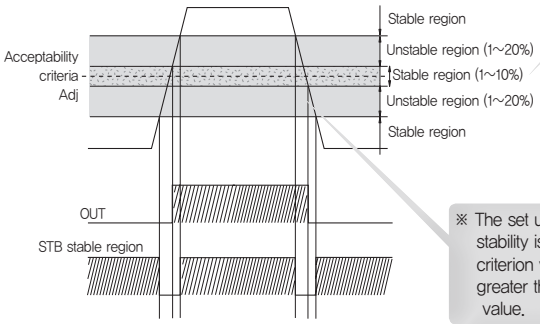
④ Slide S/W (RUN, FUN, CNT)
Sets up executive modes and priority operation at all functions
- ●RUN : General Fiber Sensor Operation Mode
  · Various light amount set up & display function
  (Ordinary Light Amount Display / Bar Display / Maximum, Minimum HOLD Display / Percent Display)
  · Displacement Set Up function (OFFSET)
  · Various Auto Teaching Function
- ●FUN : Various Additional Function Set Up Mode
  · PAGE1 : Sensor Manual Sensitivity Set Up Page
  · PAGE2 : Sensor Output Mode Set Up Page
  · PAGE3 : Count/RPM Function Set Up Page
  · PAGE4 : Additional Function Set Up Page
- ●CNT : Holds one operation mode from Up Counter, Down Counter, and RPM display functions.
  (FUN → Operates with Counter or RPM display according to the function set at the [3-1] Mode.)

※ Caution) Refer to the Parameter Chart for the Detailed Set Up and function of FUN

⑤ Optical Fiber Unit Input Hole External Diameter
Ø2.2 mm Fiber unit

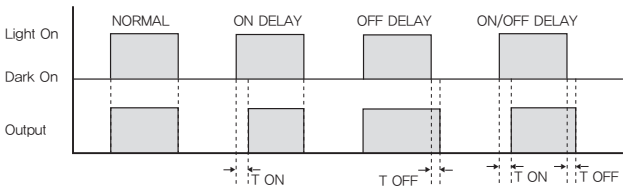
Depending on receiving level, OUT, STB operation

※ The set up range of hysteresis is 1 ~ 10 % of the criterion value.



※ The set up range of stability is 2~20% of the criterion value and is greater than the hysteresis value.

Delay setting and Output operation (in Light ON)



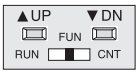
Various display function

※ How to operate a button

▲• press UP button in short.	▼• press DN button in short.
▲– press UP button in long.	▼– press DN button in long.

■ 180˚ rutation display

Changeable at FUN mode [4-4]



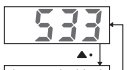
0 ˚ select

180 ˚ select

■ Various guantty of light display

Changeable a display mode press at RUN mode ▲•

●Light Volume



●BAR Display

- b - - - Light Volume 0
- b - - 1 Light Volume is more than 1
- b - H More than Low limit value of Stability
- b - HH More than Low limit value of Adjust
- b - HH Less than High limit value of Adjust
- b HHH Less than High limit value of Stability
- bHHH More than High limit walue of(Stability+10)

●Max. / Min. HOLD display
Display Max. and Minimum value during flickering

●Percentage display
· Display 100P as standard

· If set 300 as setting value
- – If light value is 300, 100P display
- – If light value is 990, 330P display

●Displacement setting function (Offset Setting)
(When press ▼• on RUN mode, it enters displacement setting)

In case of displaying ▼• by pressing
(533 Displacement "0" is displayed and the maximum display range +466 ~ –533 ").

Displacement "0" is displayed

+130 Displays

–31 Displays

※ Press the ▲• to switch the display to the general intensity.

● Press the ▲– to save current displaying. It displays andsave.

Auto Teaching Mode

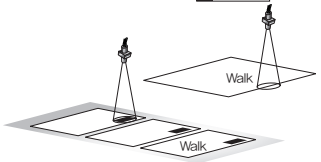
- Auto Teaching Mode Entry : Press ▼– at the RUN Mode. ("TEAC" => "txxx")
- Auto Teaching Mode Removal : Restores to the RUN Mode execution from the Teaching Mode when ▲– is pressed.

The set up outline described in the below is the set up method at the Teaching Mode.

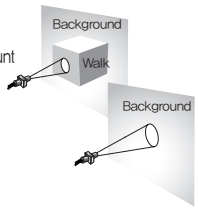
RUN ■ FUN

- 〈1 Point Teaching 〉 when detecting from a specific location of walk
  · Place it at the location for detecting the walk.
  · Complete the set up by pressing ▼• twice (once : "txxx" switch, twice: "_OK_")

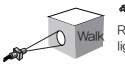
※ Walk : Object, Object to be Detected



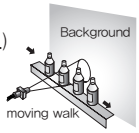
- 〈2 Point Teaching〉 when detecting delicate walk (limited region detection)
  Out if it is over 1/2 of the walk light amount and background light amount
  · Place it at the location for detecting the walk.
  · Press ▼• once. (Automatic Gain Adjustment) ("txxx" switch)
  · Remove the walk initially placed at the location. (Only background remains)
  · Complete the set up by pressing ▼• once. ("_OK_")



- 〈Maximum Light Amount〉 when detecting walk using transmission type fiber
  · Place it at the location for detecting the walk.
  · Complete the set up by pressing ▼• twice (once: "txxx" switch, twice: "_OK_")



- 〈Auto Teaching〉 when detecting moving walk without stopping it
  · Move the walk from the conveyor or operate the body of revolution (motor, etc.)
  · Difference of light amount will be automatically distinguished for set up after about 10 seconds when ▼– is pressed. ("AT_9"–〉 "AT_8"... "AT_0" –〉 "_OK_")



- Viewing Adjust Value at the Teaching Mode
  When verifying the adjust value after 1 Point, 2 Point, Maximum Light Amount and Auto Teaching
  · Displays the adjust value when ▲• is pressed once (if the adjust value is 540)
  · The sensor returns to the Teaching Mode when ▲• is pressed once again. ("txxx")

■ Initial default value

	Manual sensitivity setting (Basic input setting)		SENSOROUTPUT (RUN MODE)		COUNTER/RPM SET (CNT MODE)		Subsidiary function setting	
	1 Group	Set value	2 Group	Set value	3 Group	Set value	4 Group	Set value
1	GAIN	8	DARK/LIGHT	L	MODE (UP,DN,rpm)	UP	LOCK	DS
2	ADJUST	500	ON DELAY	OFF	PRESCALE	1	BRIGHT	7
3	HYSTERESIS	10	OFF DELAY	OFF	SETTING HI	100	BRIGHT TIME	OFF
4	STABILITY	11	ONE SHOT TIME	OFF	SETTINGLOW	50	DISPLAY 180 °	0
5	–	–	INPUT SW	AUTO	OUT1 MODE	(CNT)C (rpm)S	DEFAULT	–
6	–	–	CHANEL	CH1	ONE SHOT TIME	30	–	–

Refer to the Parameter Group Set Up for the Details on the Adjusted Values.

1) Move to the next parameter group by pressing ▲• when the parameter is displayed.
2) Current mode and current set up condition is displayed when moving the parameter.
3) Set up can be changed by firmly pressing on to ▼– for long time.
4) Just move the Slide S/W to RUN or CNT to move to the executive mode after completing the set up

Parameter

※ Manual sensitivity set

■ Parameter 1 rgroup set

Move to Group 1 ▲• in FUN mode

Parameter menu and display	Explanation	Range	Setting KEY
1-1 GAIn ▼– GAIN ▲• 1) Move to parameter 2 Group	Set up 8 levels of amplifying rate for the amplifying circuit of the light receiver.	1(Min.) ~ 8(Max.)	▼• : ▲• : Setting value change
1-2 AdJ ▼– ADJUST	Set up the sensitivity (criterion value)	5~995	
1-3 HSt ▼– HYSTERESIS	Set up GAP of the criterion at the time of deciding the presence of walk.	1 ~ 10 %	▲– : Setting completition /revert
1-4 Stb ▼– STABILITY	Set up the safe region at the time of deciding the presence of walk.	2 ~ 20 %	

1) Move to the next parameter group by pressing ▲• when the parameter is displayed.
2) Current mode and current set up condition is displayed when moving the parameter.
3) Set up can be changed by firmly pressing on to ▼– for long time.
4) Just move the Slide S/W to RUN or CNT to move to the executive mode after completing the set up.

1. When using at the Counter or RPM Measurement Mode, set up with the maximum value of [1–3] hysteresis and [1–4] safe region (stability). (When using transmission type fiber unit)
2. In the case of Auto Teaching at the RUN Mode, GAIN [1–1] and ADJU [1–2] values will change automatically.

■ Parameter 2 group

Move to Group 2 ▲• in FUN mode

Parameter menu and display	Explanation	Range	Setting KEY
2-1 dL ▼– Dark_Light ▲• 1) Move to parameter 3 Group	Set up the Up Counter, Down Counter, and RPM Meter Modes.	L : Light ON d: Dark ON	▼• : Setting value change ▲– : Setting completitio/revert
2-2 on d ▼– ON_Delay	Set up the free scale.	9,999 ms	▼•,▲• : Setting value change ▲– : Setting completitio/ revert
2-3 oFFd ▼– OFF_Delay	Set up the adjust value at the Counter.Set up the maximum value at RPM.		
2-4 onES ▼– ONE Shot Time	Set up the minimum value at RPM. (Exclusive RPM Use)		
2-5 E-In ▼– E–IN	Set up the output motion mode of Counter and RPM Meter. Refer to the chart for details of the motion mode.	None 1–TE AUTO	
2-6 CHAn ▼– CHANEL	Set up One Short Time of Out1 Port. (Unit : msec)	CH1 : ch1 CH2 : ch2	▼• : Setting value change ▲– : Setting completitio/revert

1) Move to the next parameter group by pressing ▲• when the parameter is displayed.
2) Current mode and current set up condition is displayed when moving the parameter.
3) Set up can be changed by firmly pressing on to ▼– for long time.
4) Just move the Slide S/W to RUN or CNT to move to the executive mode after completing the set up.

■ Parameter 3 Group setting (Counter/rpm)

Move to Group 3 ▲• in FUN mode

Parameter menu and display	Explanation	Range	Setting KEY
3-1 MddE ▼– MODE ▲• 1) Move to parameter 4 Group	Set up the Up Counter, Down Counter, and RPM Meter Modes.	rPn rpm Meter uP Up Counter dn Down Counter	▼• :Setting value change ▲– :Setting completitio/revert
3-2 PrE ▼– PRESCALE	Set up the free scale.	1–999(Input / PRE=Display value) 1001–1999(Input× PRE=Display value)	▼•,▲• : Setting value change ▲– : Setting completitio/ revert
3-3 S-HI ▼– SETTING HI	Set up the adjust value at the Counter. Set up the maximum value at RPM.	1–9,999	
3-4 S-Lo ▼– SETTING LOW	Set up the minimum value at RPM. (Exclusive RPM Use)		
3-5 OutN ▼– OUT1 MODE	Set up the output motion mode of Counter and RPM Meter. Refer to the chart for details of the motion mode.	Counter operation nFCrUP9R rpm operation SHL	
3-6 onES ▼– ONE SHOT TIME	Set up One Short Time of Out1 Port. (Unit : msec)	10, 20, 30, 40, 50, 100, 200, 300, 400, 500, 1000, 2000, 3000, 4000, 5000 ms (▼• DOWN value ▲• UP value)	

OUT2 (STB LED) is outputted whenever the sensitivity value is greater than the [1–4] value. (Use for verifying the presence of calculation.)

1) Move to the next parameter group by pressing ▲• when the parameter is displayed.
2) Current mode and current set up condition is displayed when moving the parameter.
3) Set up can be changed by firmly pressing on to ▼– for long time.
4) Just move the Slide S/W to RUN or CNT to move to the executive mode after completing the set up

- Set Up Example
  · Free Scale Set Up [3–2]

Example 1) counting one by one for input of 5 at the Counter Mode (Division Set Up 5)
Example 2) Counting in three for input of 1 at the Counter Mode, 3+1000=set up 1003
Example 3) 1/60 (set up 60) since 60 rpm is 1cps when displaying as CPS at the RPM Mode
Example 4) displaying with RPMx5 for input of 5 at the RPM Mode (Set Up 5)
(Displaying RPM with 0.2 input as a base)

  · Setting HI [3–3]/Setting LOW [3–4]

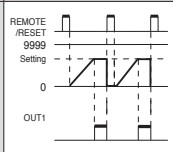
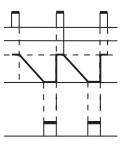
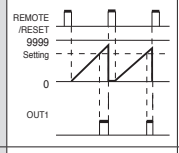
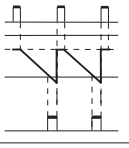
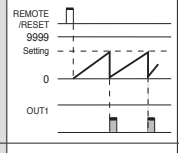
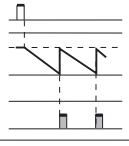
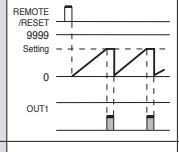
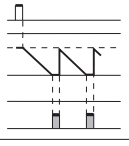
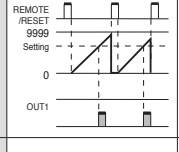
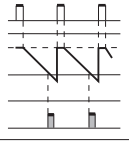
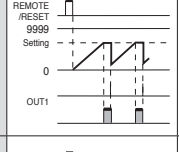
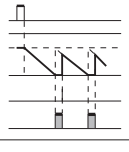
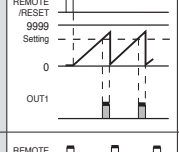
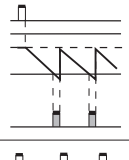
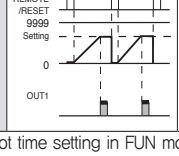
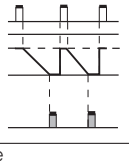
Example 1) Up Counter : when setting 100 as the setting value (Set Up [3–3] : 100)
Example 2) Down Counter : when counting down from 200 to 0 (Set Up [3–3] : 200)
Example 3) RPM Meter : when assigning output conditions by specifying rpm range of 500~600 (Set Up [3–3] HI : 600, Set Up [3–4] LOW : 500)

● Output operation mode [3–5]

· Function and output explan ation in RPM mode

Output mode [3–5]	Explanation
S (Standard)	Between high limit value [3–3] and low limit value [3–4] OUT1 ON, OUT2 OFF
H (High)	More than high limit value[3–3] OUT1, ON More than low limit value[3–4] OUT2 ON
L (Low)	More than high limit value[3–3] OUT1 ON, More than low limit value[3–4] OUT2 ON

· Function Output explan ation in Counter Keep up value ※ One shot value

Output mode	UP mode	DOWN mode	Explanations
n			Calculation stops and output is on when the adjust value is reached. The output off calculated value is reset at the rising Edge of Reset. Calculation begins at the declining Edge of Reset.
F			Calculation continues even after reaching the adjust value and the output stays on. The output off calculated value is reset at the rising Edge of Reset. Calculation begins at the declining Edge of Reset.
C			The output is generated as one short when the adjust value is reached and the calculation value is released with the Reset.
r			The output is generated as one short when the adjust value is reached and when the calculation stop one short time is over, the calculated value starts calculation with the Reset.
U			The output is generated as one short when the adjust value is reached. The calculated value is reset at the rising Edge of Reset Calculation begins at the declining Edge of Reset
P			The output is generated as one short when the adjust value is reached and the calculation value is reset. It doesn't calculate during the one short period.
q			The output is generated as one short when the adjust value is reached and the calculated value resets and calculation begins at the declining edge where the one short ends.
A			The output is generated as one short when the adjust value is reached and the calculation stops. The calculated value is reset at the rising Edge of Reset Calculation begins at the declining Edge of Reset

※One shot time setting in FUN mode

■ Parameter 4 group(subsichary function)

Move to Group 4 ▲• in FUN mode

Parameter menu and display	Explanation	Range	Setting KEY
4-1 LdCU ▼– Lock ▲• ▼• 1) Move to parameter 1 Group	FUN mode lock (refer to 5)	En : Enable dS : Disable	▼•, ▲• : Setting value change ▲– : Setting completitio/ revert
4-2 brit ▼– Bright ▼•	Brightness setting and FND brightness control	[1–7] stages	
4-3 br_t ▼– Bright Time ▼•	Bright Time setting Brightkeeping time	OFF, 5, 10, 15, 20, 30 sec 1, 2, 3, 4 min	
4-4 diSP ▼– Display 180 ° ▼•	Display rotation (180 ° rotation)	0 : Normal 180 : 180°rotation	
4-5 Init ▼– Default ▼•	Default setting (Initial value setting)	End	

1) Move to the next parameter group by pressing ▲• when the parameter is displayed.

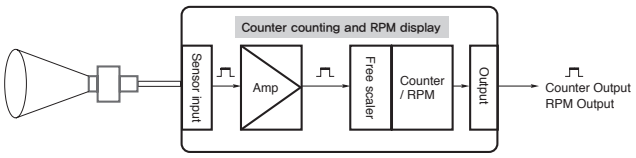
2) Current mode and current set up condition is displayed when moving the parameter.

3) Set up can be changed by firmly pressing on to ▼– for long time.

4) Just move the Slide S/W to RUN or CNT to move to the executive mode after completing the set up.

5) LOCK Release Method : Press ▲•,▲•,▼•,▲•,▲•,▼• in order

■ COUNTER / Tachometer internal function



Counter function and Set up method

It is combining the counter function to the ordinary fiber sensor function. It can be set up to output when it yields arbitrary calculated value by calculating the walk. The maximum calculated range is 9999. It can set up Up Counter and Down Counter and supports the output of free scale and 8 types of motion mode. At this time, the remote input function is changed to external reset use. Free scale is capable of displaying division and.

● OUT2 can be used as sensor output and is generated when the display value is changed.

■ Initialization of Calculation Value at the state of CNT Mode Execution

● The calculation display is '0' at the Up Count Mode and is Setting value [3–3] at the Down Count Mode when ▼• is pressed. Calculation stops while the key is pressed on.

● Initialization of calculated value with the remote reset external input

● Set up example at the Counter Mode (Refer to the parameter set up for the details of set up.)

※Caution) Must carry out sensor sensitivity set up process as well.

· Set Up Example Calculate up to 350 by counting one each for input of 3 at the Up Counter Mode and then one short time Stop the calculation at 50 msec output. Reset when the remote reset is displayed and set up to begin the calculation.

Function	Page	Set Value	Remark
Operation Mode	[3–1] [MODE]	[Up]	UP Counter setting
Free scale	[3–2] [PRE]	[0003]	3 setting
Setting Hi	[3–3] [S–HI]	[0350]	350 value
Setting Low	No use in Counter mode		
Output Mode	[3–5] [OUTM]	[n]	Refer to counter mode table
One Shot Time	[3–6] [ONES]	[500]	500 ㎳ setting

● Set up Example 2) it down counts from 500 to 0 and the input displaysmultiple every 1 input. The original short delay output is 100 ms. Shorted output goes to zero, it automatically sets the value from 500 tocount down again after the start.

Function	Page	Set Value	Remark
Operation Mode	[3–1] [MODE]	[Dn]	DOWN Counter setting
Free scale	[3–2] [PRE]	[1002]	2 setting
Setting Hi	[3–3] [S–HI]	[0500]	500 value
Setting Low	No use in Counter mode		
Output Mode	[3–5] [OUTM]	[c]	Refer to counter mode table
One Shot Time	[3–6] [ONES]	[100]	100 ㎳ setting

● Shifted the slide switch to CNT, all set up is complete.

rpm Function & Set Up Method

It is the Tachometer Display Function. It is capable of measuring from 1~9999rpm and supports speed monitoring output and maximum/minimum adjust output. The speed monitoring output is materialized to give out alerting output when goes beyond 10% of the adjust value. With the function support of free scale (0001~0999), CPS value can be displayed when set up at 60. Also, it supports the free scale function. However, the display value cannot exceed 400 CPS/ps value. The output is generated in one short.

● Set Up Example at the RPM Mode (Refer to the parameter set up for the details of set up.)

※Caution) Must carry out sensor sensitivity set up process as well.

· Set Up Example RPM is displayed in the case of one rotation based on the input of one for exclusive use of RPM display and the output is generated by having 500rpm to 550rpm as standard. For between 500 ~ 550, set up as OUT1 ON / OUT2 OFF.

Function	Page	Set Value	Remark
Operation Mode	[3–1] [MODE]	[rpm]	RPM Mode setting
Free scale	[3–2] [PRE]	[0001]	1 setting
Setting Hi	[3–3] [S–HI]	[0550]	OUT1 set value
Setting Low	[3–4] [S–LO]	[0500]	OUT2 set value
Output Mode	[3–5] [OUTM]	[S]	Output Mode
One Shot Time	[3–6] [ONES]	[OFF]	Real time output

● Set up Example 2) It's only for RPM Display. In case of 1 cycle based on 60inputs, CPS Display, if less than 500 rpm turns OUT ON and over than 500turns, OUT2 ON / OUT1 turns ON when RPM is over than 550.

Function	Page	Set Value	Remark
Operation Mode	[3–1] [MODE]	[Rpm]	RPM Mode setting
Free scale	[3–2] [PRE]	[0060]	60 setting
Setting Hi	[3–3] [S–HI]	[0550]	OUT1 set value
Setting Low	[3–4] [S–LO]	[0500]	OUT2 set value
Output Mode	[3–5] [OUTM]	[H]	Output Mode HI
One Shot Time	[3–6] [ONES]	[OFF]	Real time output

● Shifted the slide switch to CNT, all set up is complete.