PR

Printer PR8080A

Specifications

SSF50651 16.08

■Introduction

Receiving flow rate pulse signal from flow meter, batch counter and so on, it prints totalized flow quantity per batch and total flow rate per setting time.

■Features

- Enabling 8 input flow rate pulse
- Indication 8 digits count and daily total, and 10 digits monthly total and total.
- Indication unit can be specified up to arbitrary 3 digits max.
- Depend on the kind of pulse signal, max input frequency can be set in 2 stages.
- LCD on the panel makes setting and quantity confirmation easy.
- It can print date & time by internal clock.
- Multiplying factor and naming of each channel can be specified arbitrary.
- Having communicative terminal end. (option)
- Panel mounting or set on the desk.
- AC free power supply unit.

■Specifications

Pulse input

Number of input	8 channel (Photo-coupler insulation) Maximum input frequency is common in all channels.
No-contact input	
Frequency	100Hz or under (ON/OFF ratio 1:1)
Type of signal	Voltage or open-collector pulse signal
Signal level	H:8～24V L:5V or under
Voltage & current	Approx. 12V Approx. 6mA (with internal 12V power source) Approx. 24V Approx. 12mA (with external 24V power source)
Contact input	
Frequency	20Hz or under (ON/OFF ratio 1:1)
Voltage & current	Approx. 12V Approx. 6mA (with internal 12V power source) Approx. 24V Approx. 12mA (with external 24V power source)

Counter

Count, daily total	8 digits counter (zero suppression print)
Monthly, total	10 digits counter (zero suppression print)

Scaling

Totalize with unscaled pulse from each flow meter.

Multiplying factor	0.1000～1.000
Dividing factor	1/1, 1/10, 1/100, 1/1000, 1/10000

Decimal point

Decimal point can be set for each channel.

Chose from without /0.0 /0.00 /0.000

Naming

Channel name can be specified for each channel

Standard name	Channel1: 1CH ~ Channel 8: 8CH
Letter	Alphanumeric character up to 3 digits max.

Unit

Indication unit can be specified for each channel

Standard unit: mL, L, m^3, GAL, g, kg, t,

Clock

Indication:	Indication as print when power on or total flow rate print and indicate on LCD.
Clock	Up to 31st December, 99, 23 hours 59 minutes 59 seconds
Leap year	Set with the last 2 digits of Gregorian calendar year and automatically renewed.
Time reference	Internal crystal oscillator Daily difference: Within 4sec (0～40℃) Reference value: Approx. 0.5sec (25±3℃)
Synchronization with supply frequency	Synchronize with commercial power supply frequency (50Hz / 60Hz Selection setting)

Action indication

Flash on and off every one second (Feed switch) LED indication (Green)

Indicator

LCD	: 16 letter and 2 line indication.
Character size	: width 2.8mm height 4.9mm

Operation

Setting procedure by key switch on a panel

Contents	Setting of clock. Confirmation and print of count, daily total, monthly total, and total. Print of scaling, naming, and flow unit. Initial setting

Manual print

Enabling to check the total value by operating key switch on a panel.

Print the count, daily total, monthly total, and total of all channels.

Auto print

Print the count, daily total, monthly total, and total of all channels at each set time interval with reference to 0:00 on the clock.

Interval time	10min, 20min, 30min, 1hr, 8hr, 12hr, 24hr, and no-function.	
Resetting	Count:	Reset at each print
	Daily total:	Reset on 24:00 at end of day.
	Monthly total:	Reset on 24:00 at end of month.
	Total:	Not reset

Control input

Type of signal No-voltage contact, or open-collector signal

Voltage & current Approx. 12V Approx. 6mA (with internal 12V power source)

Approx. 24V Approx. 12mA (with external 24V power source)

Signal length 50msec and over

- Print signal

  Count value of each channel will be printed then reset

  Delay time of printing: Default setting is 3sec (for counting over-flow of batching)

  Setting time: 0- 30sec

- Collective print signal

  Count value for all channel will be printed then reset

  No delay time of printing

- Reset signal

  Count, daily total, monthly total and total will be printed, then reset count, daily total, and monthly total.

- Count inhibit signal

  1.No totalizing is made while this signal is ON.

  2.Total of all channels will be reset with reset signal ON in the same time. (Count, daily total, monthly total, total will be printed, then reset)

No paper output

When the rolled paper is getting smaller, output will be OFF.

Kind of signal : Open-collector

Voltage and current : 30V DC 50mA

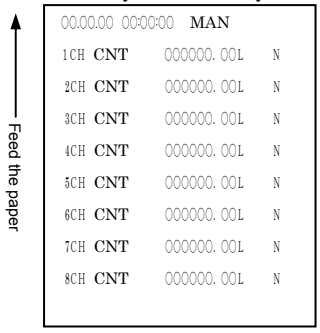
Printing contents

The channel which is not used or of which total rate is zero will not be printed.

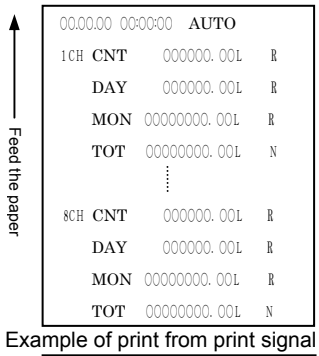
Reset indication R: reset N: no reset

Example of manual print

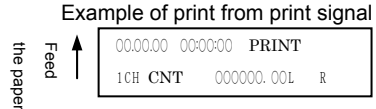
Print of daily total, monthly total, and total is same.



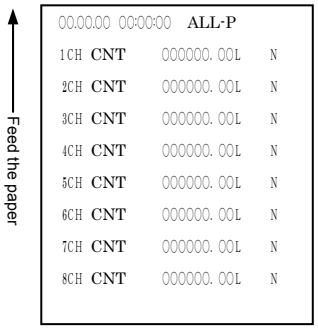
Example of auto-print (example of end of month)



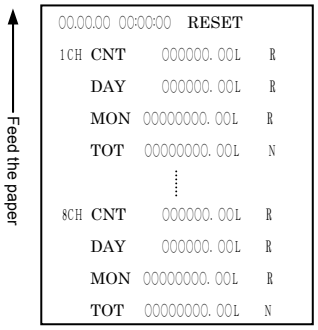
Example of print from print signal (example of channel 1)



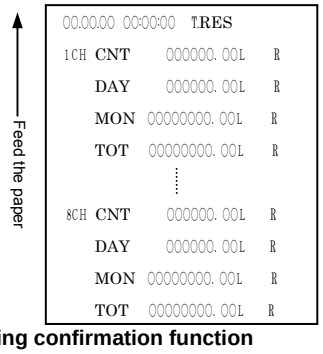
Example of print from collective print signal



Example of print from reset signal

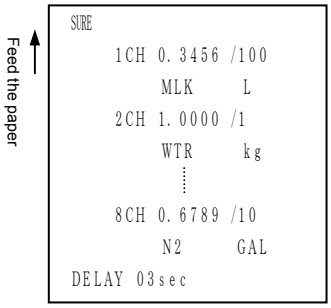


Example of total reset



Setting confirmation function

Scaled value, naming, flow unit, and delay time of printing of all channels can be confirmed and printed.



No paper action

Detecting method Detecting the diameter of rolled paper mechanically.

Detecting action No paper indication (Flashing red lamp), No paper output, stopping the printing action, memorize data (of 32 lines) and after deactivate, all print.

Printing mechanism

Printing system 5 x7 dots print

Character size Width 1.8mm x Height 2.5mm 24 digits

Speed 1 line/approx. 0.7 sec

Mechanism M180 (EPSON), Life: Approx 1 million lines

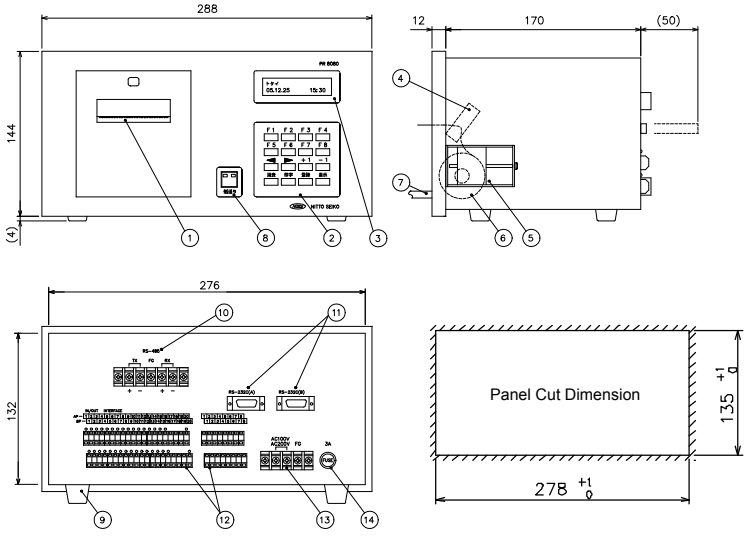
Ink Ribbon type ERC-22B (EPSON), Life:

	0.3 million characters
Printing paper	Width 58mm x Length 22mm, rolled paper PR58 x 60 Life: Approx. 6,000 lines/roll. A red mark appears on the last 1m for service.
Communication	No use in standard. (option by changing software) RS-232C (2 circuits), RS-485 (1 circuit)
Backup battery	Lithium battery: ER3VC (Toshiba Battery Co., Ltd.) Operates the clock and protects the totalized value while blackout. Working time: Approx. 7years (Time for replacement: 5years)
Power for transmitter	12V DC ±5%, 400mA
Insulation	500V DC 20MΩ and over (between power supply terminal and casing)
Withstand voltage	1500V AC, 1 minutes (test point is same as that of insulation resistance)
Noise resistance	Square wave noise by noise simulator 1000V (Noise width 1μs, Polarity ±, Application by synchronization with power source, Phase 0～360°)
Power	85～264V AC, 50/60Hz
Power consumption	30VA or under
Ambient temperature	0～+40℃ (Without condensation)
Mass	Approx. 3.5kg
Casing	Material: Sheet metal, plated (front) Body: Munsell 2.5Y9/1 Half-shine (cleam color) Sub-panel: Munsell 5Y7/1 Half-shine (light beige)
Accessories	Printing paper: 2 rolls, Ribbon cassette: 1 pc., Power cable: 1 pc (2m), Fuse: 2 pcs. (3A), Mounting fixture: 1set

■Action

- Turn on the main power
  - Printing time and Flash on and off every one second with green light when turn on the power.
    If time is different, please adjust with time setting.
- Counting action
  - After turn on power, count pulse signal from each channel
  - When count inhibit signal is ON, stop counting.
- No paper action
  - When no paper is detected, indicate no paper (flashing red lump) and stop the printing action. 32 lines of data will be memorize while stop the print. And print after change the paper.
- Operation key switch
  - Indicate key function from [F 2] to [F 8] by pushing [F 1]. Please select objective function.
    [F 2] : Time setting [F 3] : Count confirmation
    [F 4] : Daily total confirmation [F 5] : Monthly total confirmation
    [F 6] : Total confirmation [F 7] : Setting confirmation
    [F 8] : Initial setting
  - At initial setting can set following contents.
    (1) Synchronization with supply frequency (2) Interval of auto print (3) Max frequency (4) Enumerative direction (5) Multiplying factor (6) Dividing factor (7) Decimal point (8) Naming (9) Total unit (10) Resume (11) Printing direction (12) Delay time
- Time setting [F 2]
  - Do time adjustment within ±30sec with [SET] key switch. Resetting of seconds only for a difference less than 30 seconds. In the case of a difference of 30 seconds and over, reset seconds and carry up to minute.
  - Adjustment of minute to year is made by [<] [>] [+ 1] [- 1] key switch and register with [SET] key switch.
- Printing action
  - There are 6 kinds of printing function as below, and kind of printing function is printed in right side of time.
    (1) Manual print (MAN)
    (2) Auto-print (AUT)
    (3) Print from print signal (PRINT)
    (4) Print from collective print signal (ALL-P)
    (5) Print from reset signal (RESET)
    (6) Print when total reset (TRES)
  - In manual print can check the count value of that time. No reset after print.
  - Reset after print except for manual print. In case of reset, “R” is printed on right side of the paper. In case of No reset, “N” is printed on right side of the paper.
  - In case of not use 8CH etc, the channel of which value is zero is not printed. In this case, usable as a printer only for 7CH

■External & panel cut dimensions



No	Name
1	Printed paper outlet
2	Keys
3	LCD indicator
4	Print mechanical
5	Mounting fixtures
6	Roll paper
7	Sub-panel (Front door)
8	Feed paper switch
	Green blinks: Indicats internal watch is working
	Red blinks: Indicats there is few paper.
9	Rubber pads
10	Terminal of RS-485
11	Terminal of RS-232C (A) & (B)
12	Terminal of input or output
13	Terminal of power input
14	Power fuse

■Terminal arrangement

● Power source terminal block

No.	Signal Name
N	Power AC85～264V
L	
FG	GND

● Signal terminal block

No.	Signal Name
AP1	Flow Signal Input CH.1
AP2	Flow Signal Input CH.2
AP3	Flow Signal Input CH.3
AP4	Flow Signal Input CH.4
AP5	Flow Signal Input CH.5
AP6	Flow Signal Input CH.6
AP7	Flow Signal Input CH.7
AP8	Flow Signal Input CH.8
AP9	Print Signal Input CH.1
AP10	Print Signal Input CH.2
AP11	Print Signal Input CH.3
AP12	Print Signal Input CH.4
AP13	Print Signal Input CH.5
AP14	Print Signal Input CH.6
AP15	Print Signal Input CH.7
AP16	Print Signal Input CH.8
AP17	Not USED (Do not Connect)
AP18	
AP19	
AP20	
AP21	Reset Signal Input
AP22	Count Inhibit Signal Input
AP23	Collective print signal
AP24	Not USED (Do not Connect)
AP25	No paper output
AP26	Not USED (Do not Connect)
AP27	+24V Input
AP28	+12V Output

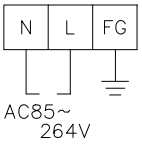
No.	Signal Name
BP1	Not USED (Do not Connect)
BP2	
BP3	
BP4	
BP5	
BP6	
BP7	
BP8	
BP9	
BP10	
BP11	
BP12	
BP13	
BP14	
BP15	
BP16	
BP17	
BP18	
BP19	
BP20	
BP21	0V COMMON
BP22	
BP23	
BP24	
BP25	
BP26	
BP27	
BP28	

In case of using 24VDC for input circuit, please connect to AP27 and BP27

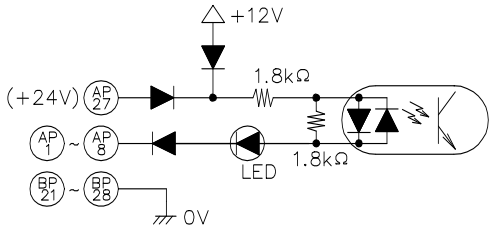
Applied signal cable: 0.5 ~ 1.25 mm^2 Screw tightning torque: 6 kgf・cm or under.

■Wire connection

● Power source connection



● Pulse input circuit

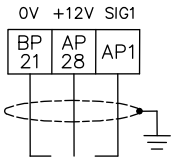


● Pulse input connection (Example of CH1)

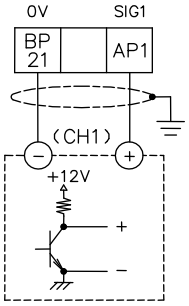
(Use the shielded cable)

No-contact input

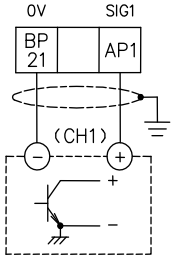
Case of no-contact 12V pulse flow meter



Case of no-contact 12V pulse signal

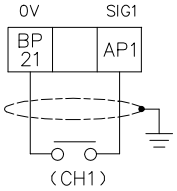


Open-collector input



Contact input

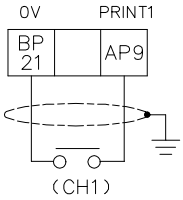
(Please set the maximum frequescy 20Hz)



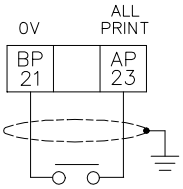
● Control input connection

(Use the shielded cable)

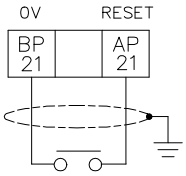
Print signal



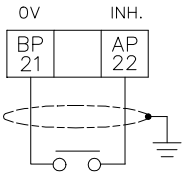
collective print signal.



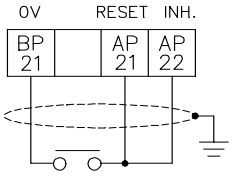
Reset signal



Count inhibit signal



Total reset signal



■Model

Model	Specification code			Remark
PR	·····			Counting printer
	8080A	·····		Version symbol
Additional specification (option)		/E	·····	English print
		/Z□	·····	Another special software option (□ is series number)

◆◆◆◆◆Matters to be specified at placing of order◆◆◆◆◆

Input pulse unit and indication unit.

▼The contents of description are subject to change without notice.

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