

# ***FS-8000A Application Charts***

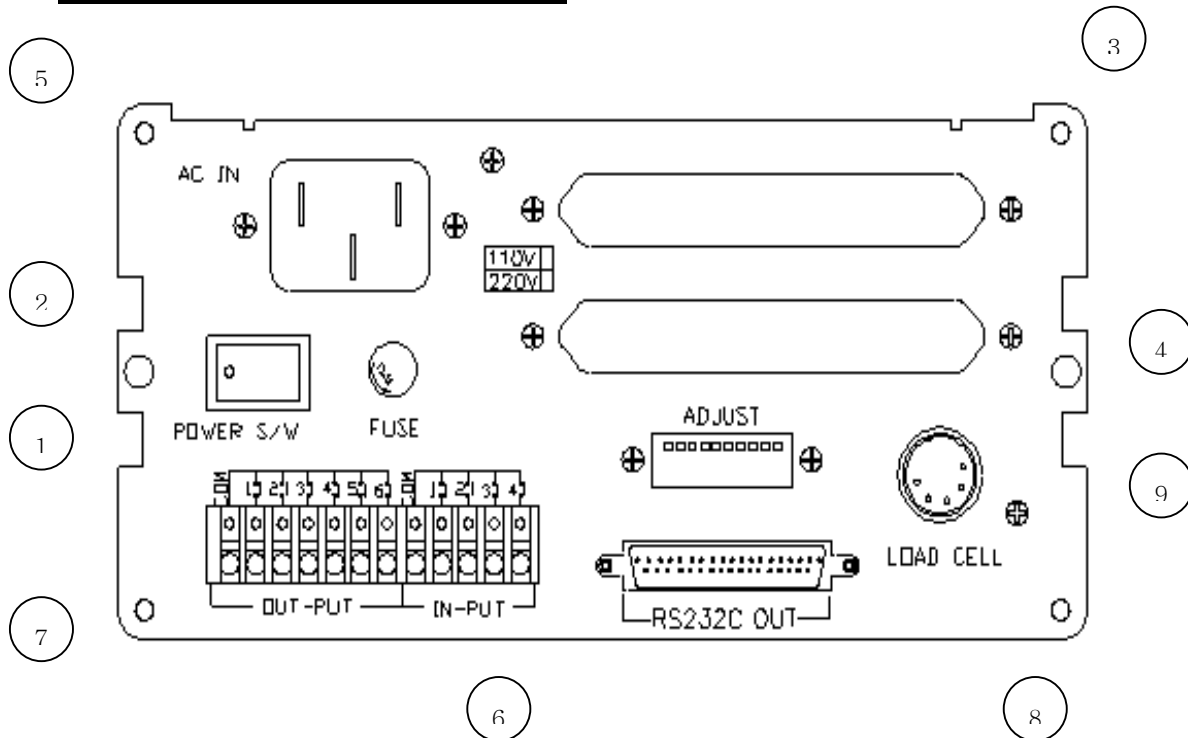
## **1. FS-8000A Figures**



## **2. FS-8000A Features**

- *Control for Packer, Hopper, Limit, Concrete Mixing Scale.*
- *Auto Span Calibrations AND Lock out Function to protect the Calibrations by Hardware system.*
- *Shielded by Aluminum Case for the Immunity against all forms of Radio Frequency Interference and Susceptibility.*
- *Wide Range of Capacity and Division can be easily set by Keyboard.*
- *Weight Memory Back-up for 10years. AND Available to drive 8pcs of Load cells(350Ω)*
- *Available to be installed by Table or Panel Mounting Type*
- *Available to compensate with the ERROR weight of Each Step in Each BIN by Error Key.*
- ***6pcs of Control Relay built in(1st,2nd,3rd,4th,Finish,Empty).***
- ***Available to weigh many kinds of Materials by 4STEP Control System***
- *Weighing Operation CODE can be showed by Function Key*
- *Available to interface with RS-232C basically*

### 3. FS-8000A Real Side Functions.

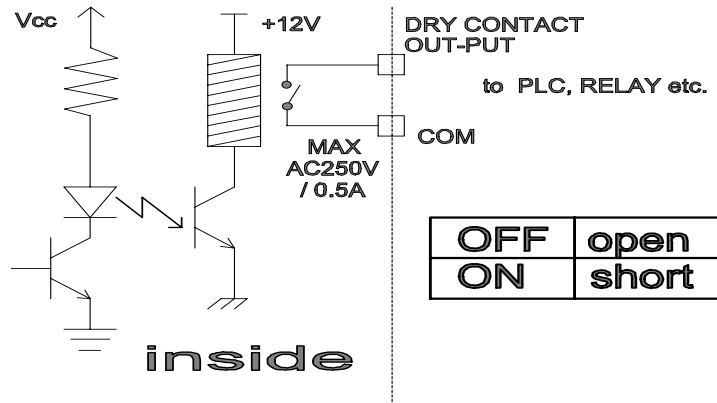


1. *Power ON/OFF switch*  
: It had better use get about 10minute warming time for a precise weighing
2. *Fuse (AC250V, 0.3A)*
3. *DATA OUT : Serial I/F,RS422, RS485, BCD Out, Analog Out (0-10V or 4-20mA), Print out(Optional)*
4. *ADJUST : Dip switch for zero adjustment & span calibration*  
(1-6 : zero adjustment, 7-8 : span calibration, 10 : Lock set)
5. *AC IN : AC110/220V Dual Power input plug*  
: AC IN was set with 220V first
6. *INPUT : Input port from external (See SETUP F-15)*
7. *OUTPUT : Output port for external control*
8. *( A contacting point with non-voltage) See SETUP F-16*
8. *RS232C/Current Loop (25P D-type Female) : Standard installed*
9. *LOAD-CELL Connector(N-16)*

① EX+    ② EX-    ③ SIG+    ④ SIG-    ⑤ SHIELD

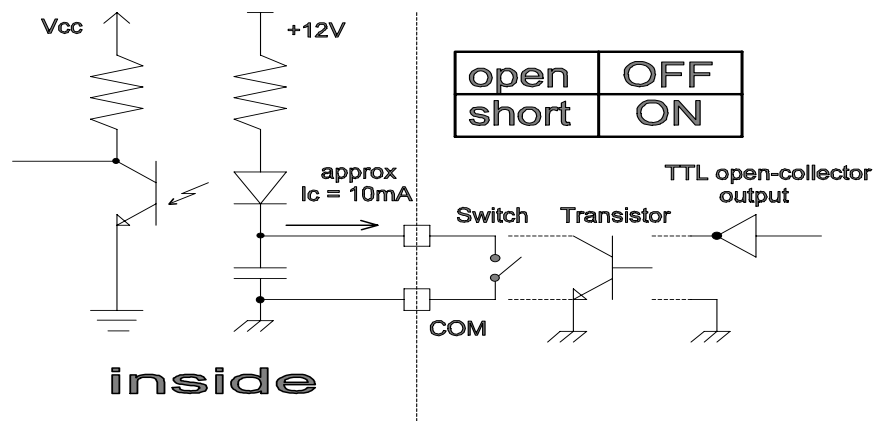
#### 4. OUT-PUT MODE electric Diagram on the Real Side

- COM and OUTPUT Terminal was connected by Non-Voltage contact.
- Each OUTPUT Terminal Function can be set by F16.
- ♣ Pls don't use OUTPUT MODE Signal to drive a Motor or others.
- ♣ Pls use OUTPUT MODE signal for a signal only.
- ♣ Max. Contacted Capacity : AC250V/0.5A

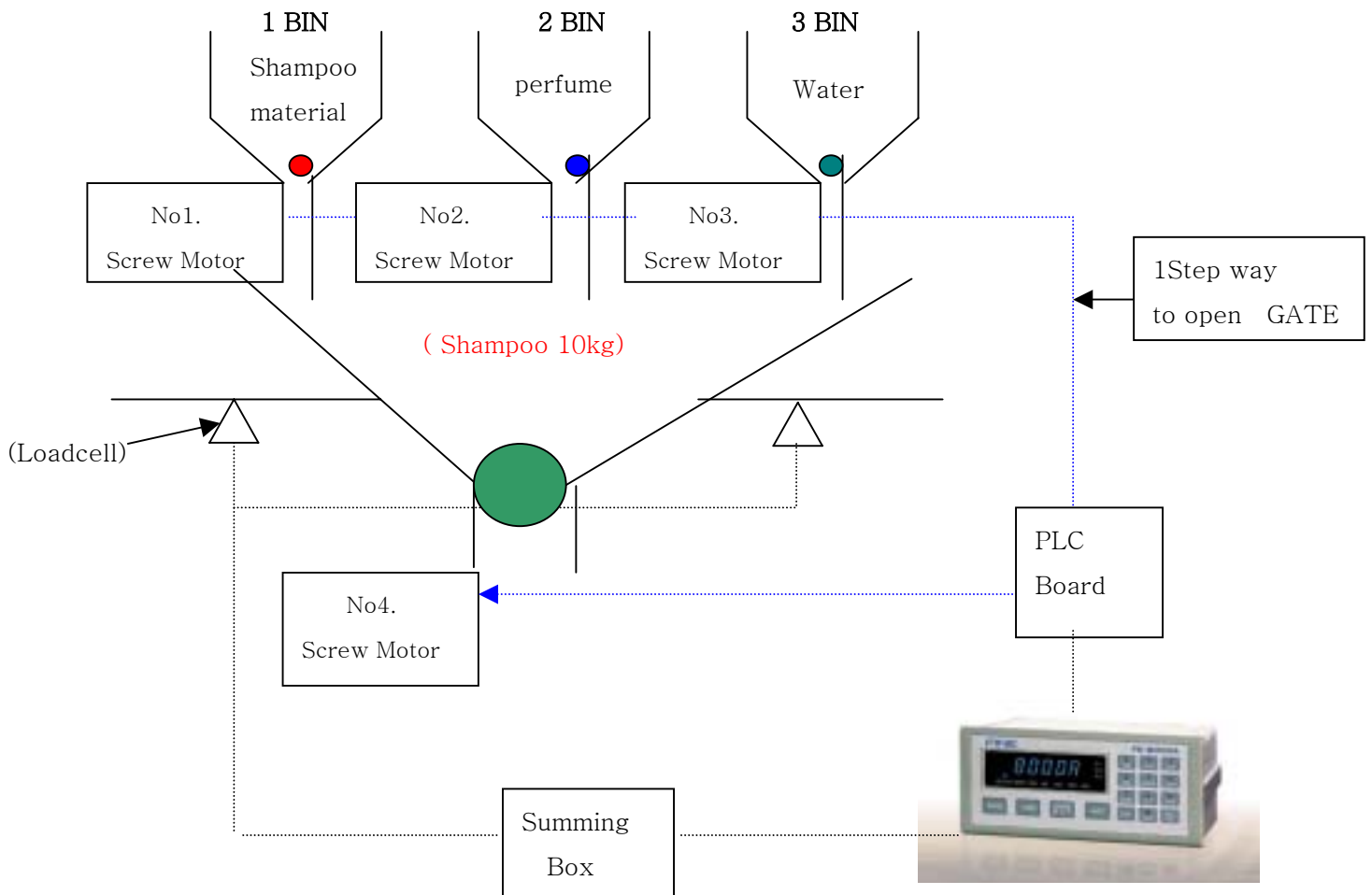


#### 5. IN-PUT MODE electric Diagram on the Real Side

- This In-Put Mode can be used to control from the external control mode
- Each INPUT Terminal Function can be set by F15
- INPUT can be done by the connection between COM and EACH INPUT Terminal
- INPUT Terminal was being supplied with 12V inside and Pls don't use the POWER from outside.
- Current was Appr. 10mA ..
- Minium INPUT TIME must be over 50m/sec



## **6. Application for Shampoo Mixtures Weighing**



### **6-1. Procedure Flow for weighing shampoo**

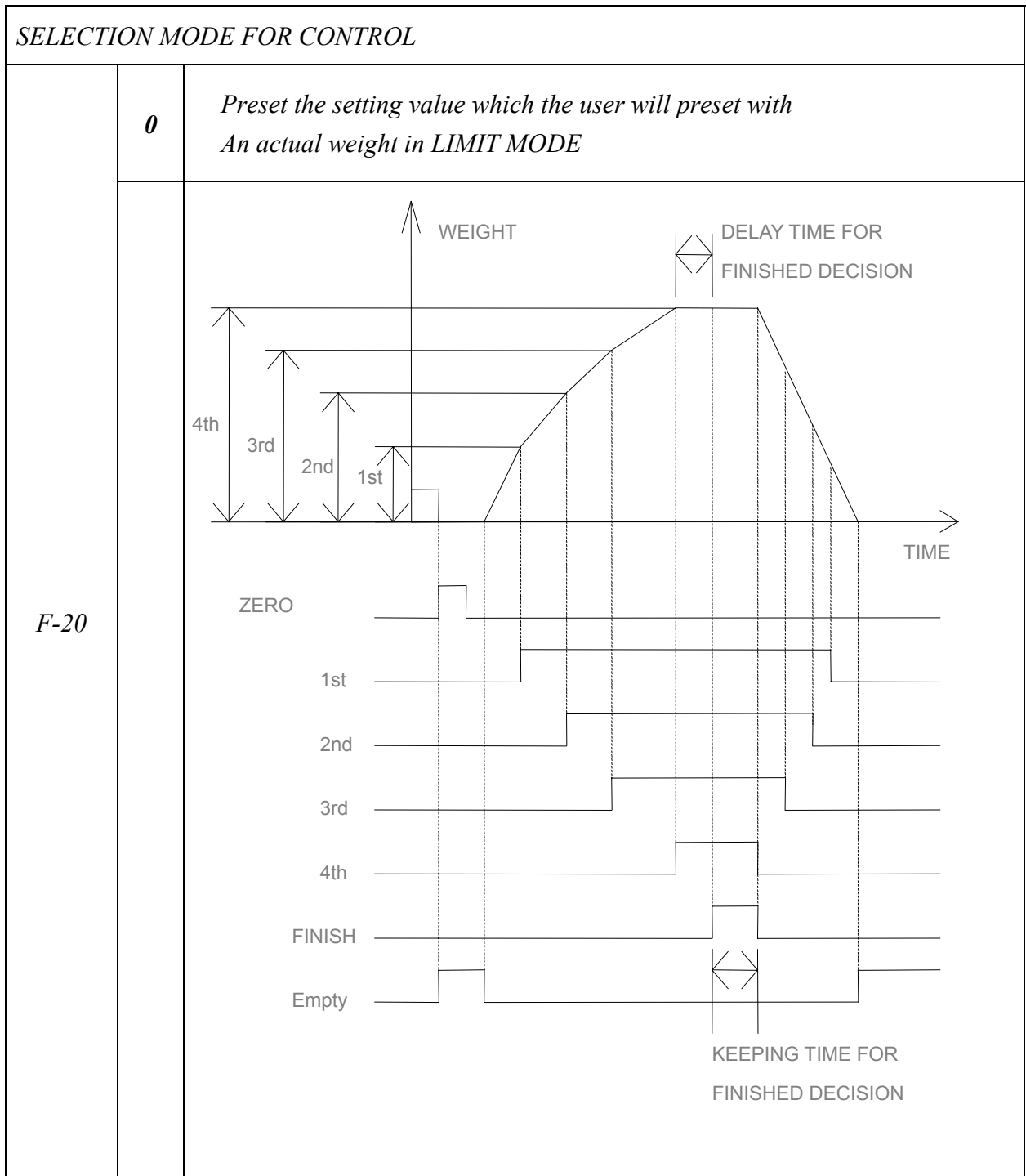
#### **6-1-1. For sample Weighing Weight.**

- 1BIN : 5Kg(Shampoo Materials)
- 2BIN : 2Kg(Perfume).
- 3BIN : 3Kg(Water).
- Total : 10Kg(Accumulated Weight).

#### **6-1-2. Relay Output Signal.**

- 1<sup>st</sup> Relay : 1BIN Motor Stop(No1 Motor).
- 2<sup>ND</sup> Relay : 2BIN Motor Stop(No2 Motor).
- 3<sup>rd</sup> Relay : 3BIN Motor Stop. (No3 Motor).
- Finish Relay : Hopper Scale Gate Open(No4 Motor).
- Empty Relay : Re-Start Key Relay

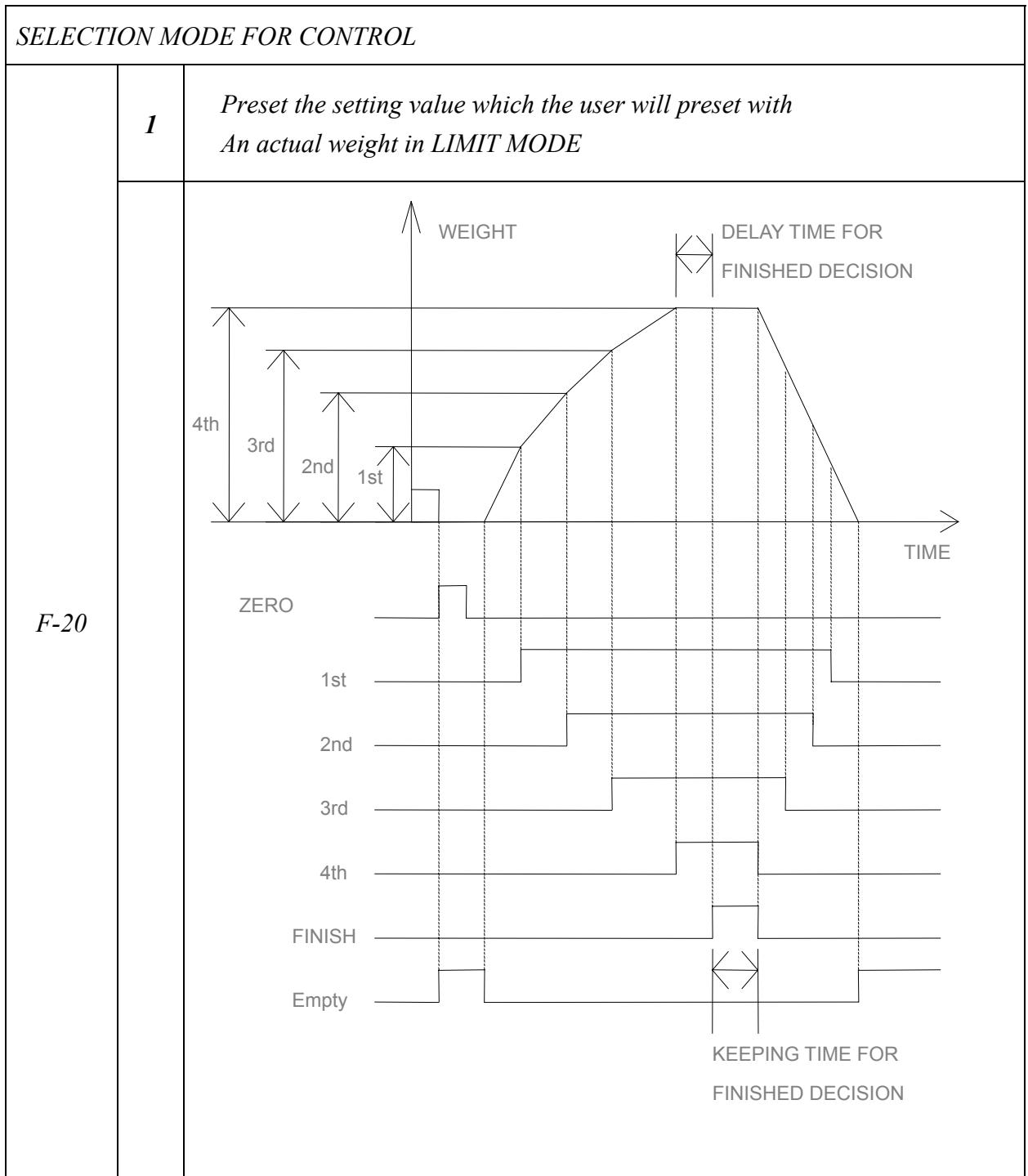
## 7. Relay Timing Diagram for 6-1-2 accumulated weighing scales



7-1. Parameter Setting Value for the above F20-00.

- 1<sup>st</sup> Relay : 5kg setting Value to Indicator ( Actual Weight : 5kg)
- 2<sup>nd</sup> Relay : 7kg Setting Value to Indicator ( Actual Weight : 2kg)
- 3<sup>rd</sup> Relay : 10kg Setting Value to Indicator ( Actual Weight : 3kg)

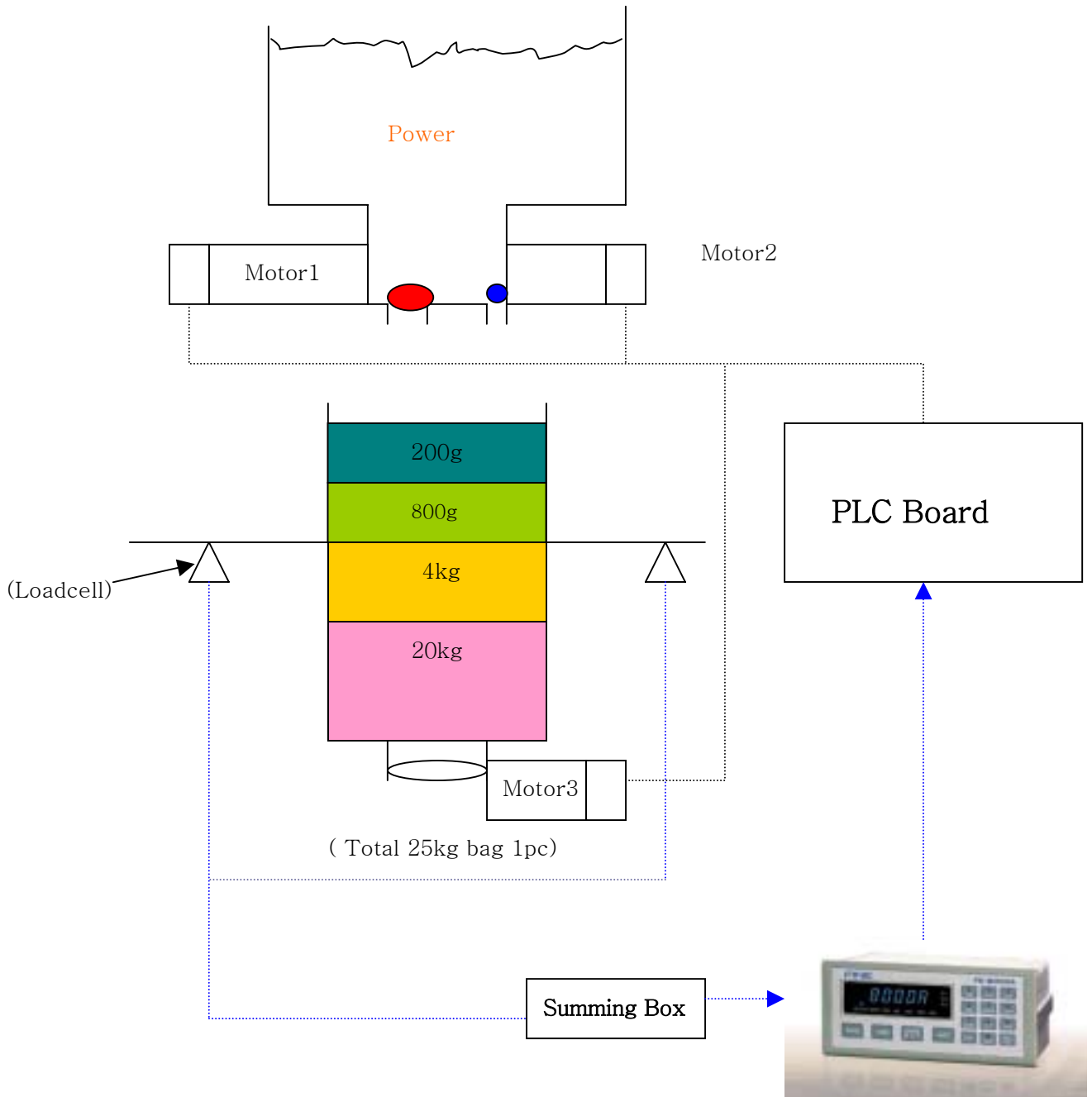
**7. Relay Timing Diagram for 6-1-2 accumulated weighing scales**



7-1. Parameter Setting Value for the above F20-01

- 1<sup>st</sup> Relay : 5kg setting Value to Indicator ( Actual Weight : 5kg)
- 2<sup>nd</sup> Relay : 2g Setting Value to Indicator ( Actual Weight : 2kg)
- 3<sup>rd</sup> Relay : 3kg Setting Value to Indicator ( Actual Weight : 3kg)

**8. Application for BATCHING SCALE**



## **8-1. Procedure Flow for BATCHING SCALE**

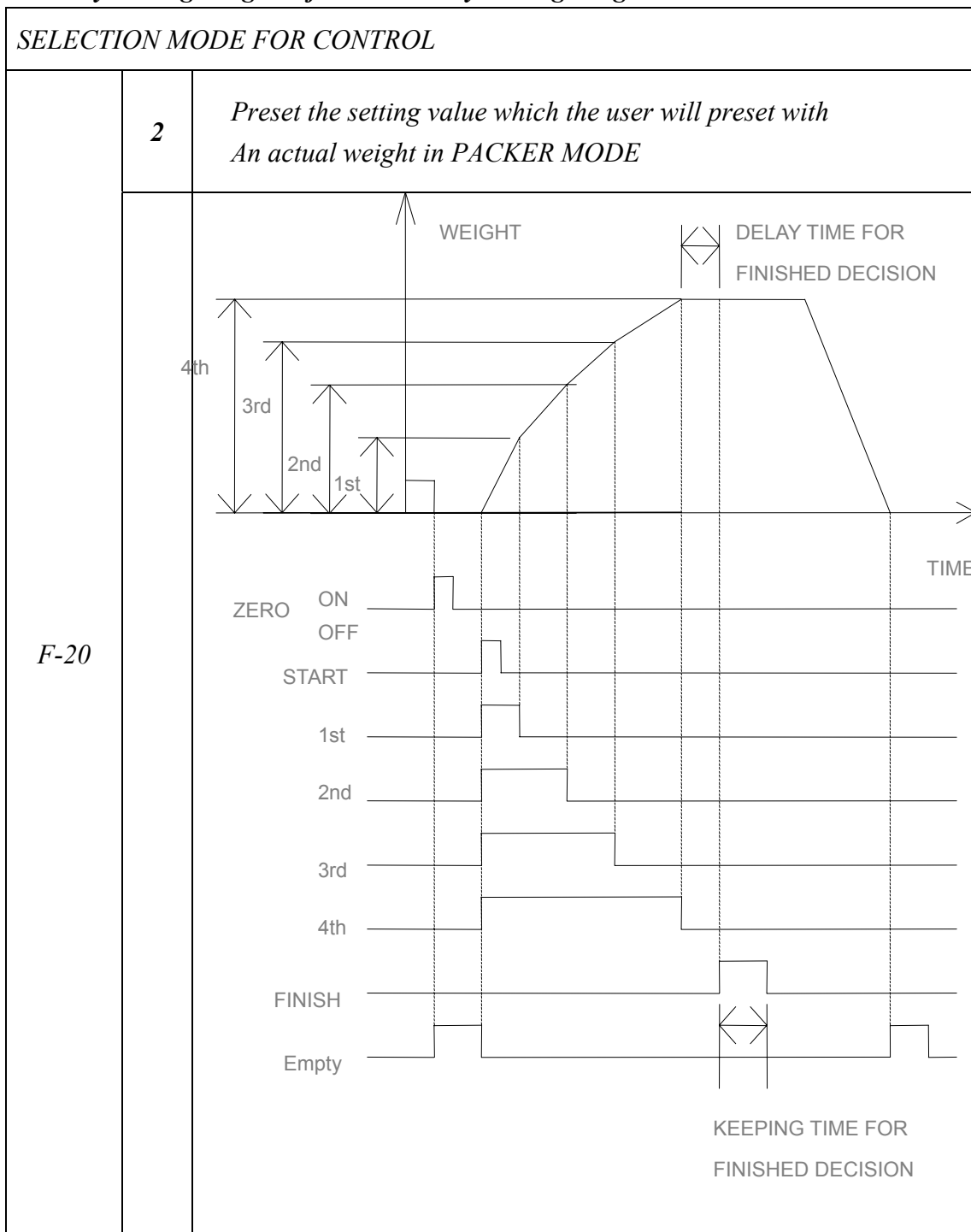
### *8-1-1. Relay Setting for a precise weight by 4step Control*

- *1<sup>st</sup> Relay Setting : 20kg*
- *2<sup>nd</sup> Relay Setting : 4kg*
- *3<sup>rd</sup> Relay Setting : 800g*
- *4<sup>th</sup> Relay Setting : 200g*

### *8-1-2. Relay Output Signal.*

- *Start Key : Open the BIN GATE*
- *1<sup>st</sup> Relay : 1 Motor Running(Decrease)*
- *2<sup>ND</sup> Relay : 1 Motor Running(Stop)*
- *3<sup>rd</sup> Relay : 2 Motor Running(Decrease)*
- *4<sup>th</sup> Relay : 2 Motor Running(Stop)*
- *Finish Relay : 3 Motor Running( Hopper Scale Gate Open)*
- *Empty Relay : Re-Start Key Relay*

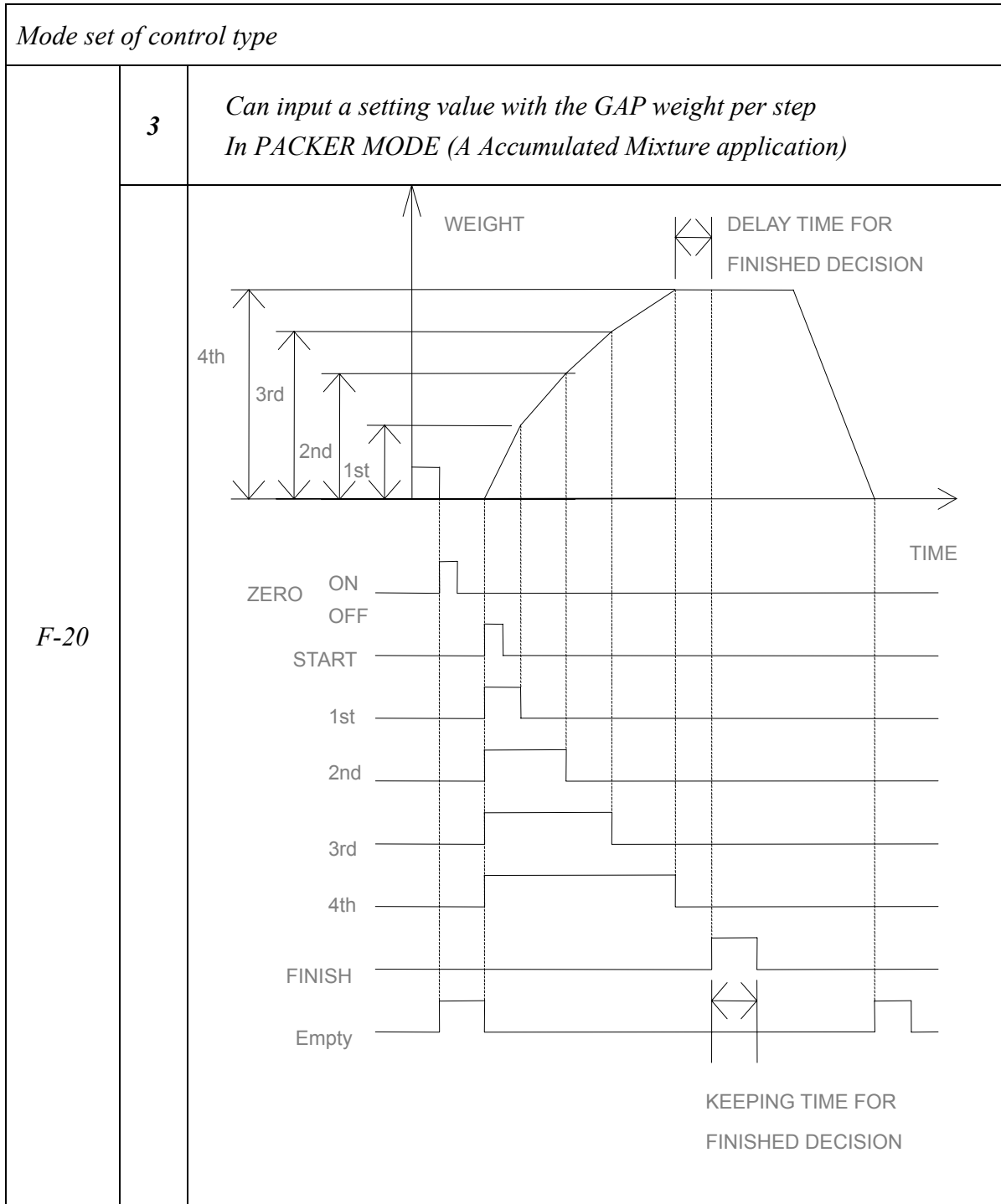
**9. Relay Timing Diagram for 8-1-2 Relay Timing Diagram**



9-1. Parameter Setting Value for the above F20-00.

- 1<sup>st</sup> Relay : 20kg setting Value to Indicator ( Actual Weight : 20kg)
- 2<sup>nd</sup> Relay : 24kg Setting Value to Indicator ( Actual Weight : 4kg)
- 3<sup>rd</sup> Relay : 24.8kg Setting Value to Indicator ( Actual Weight : 800kg)
- 4<sup>th</sup> Relay : 25kg Setting Value to Indicator ( Actual Weight : 200kg)

### 9. Relay Timing Diagram for 8-1-2 Relay Timing Diagram



9-1. Parameter Setting Value for the above F20-00.

-1<sup>st</sup> Relay : 20kg setting Value to Indicator ( Actual Weight : 20kg)

-2<sup>nd</sup> Relay : 4kg Setting Value to Indicator ( Actual Weight : 4kg)

-3<sup>rd</sup> Relay : 800g Setting Value to Indicator ( Actual Weight : 800kg)

-4<sup>th</sup> Relay : 200g Setting Value to Indicator ( Actual Weight : 200kg)

## **10. FS-8000A FUNCTION LIST**

**(00 Group - For the setting of basic operation)**

<i>Function No.</i>	<i>Function</i>	<i>Contents</i>
<i>F-00</i>	<i>Select S &amp; C MODE</i>	<i>Can select for SETUP or CALIBRATION</i>
<i>F-01</i>	<i>Choose weiging dimension</i>	<i>kg, ton, lb</i>
<i>F-02</i>	<i>Weight BACK-UP</i>	<i>NORMAL, BACK-UP</i>
<i>F-03</i>	<i>Set for zero tracking range</i>	<i>0, 0.5, 1, 2 DIGIT</i>
<i>F-04</i>	<i>Set for motion band range</i>	<i>0, 2, 5, 10 DIGIT</i>
<i>F-05</i>	<i>Set for auto zero tracking range (AUTO -ZERO)</i>	<i>0-99 (Auto -zero range)</i>
<i>F-06</i>	<i>Digital filter</i>	<i>0-9 (Decrease the vibration)</i>
<i>F-07</i>	<i>Set for zero setting range</i>	<i>2, 10, 50, 90% of Max.capacity</i>
<i>F-08</i>	<i>Set for stable judgement delay time</i>	<i>0 - 99 (1count = 0.1 sec)</i>

**(10 Group - For the setting of input or output function)**

<i>F-10</i>	<i>Keyboard lock</i>	<i>Prohibit or allow the key use</i>
<i>F-11</i>	<i>Zero, Tare operating mode</i>	<i>When stable or unstable</i>
<i>F-12</i>	<i>Tare input mode</i>	<i>Known tare or key tare setting</i>
<i>F-13</i>	<i>Empty signal mode</i>	<i>Output choice under zero or empty</i>
<i>F-14</i>	<i>Empty range setting</i>	<i>Zero or empty range setting</i>
<i>F-15</i>	<i>Input mode set from external</i>	<i>Set of input function</i>
<i>F-16</i>	<i>Output mode set to external</i>	<i>Set of output function</i>
<i>F-18</i>	<i>Remove mode of total weight</i>	<i>Auto-remove after printing sub,gross weight</i>

**(20 Group - For the setting of control mode)**

<i>F-20</i>	<i>Set for control mode</i>	<i>LIMIT, PACKER</i>
<i>F-21</i>	<i>Delay time for End signal</i>	<i>0-99 (1count = 0.1sec)</i>
<i>F-22</i>	<i>Maintenance time for End signal</i>	<i>0-99 (1count = 0.1sec)</i>

**(30 Group - For the setting of serial communication format)**

F-30	Baud rate setting	300, 600, ....., 38.4K bps
F-31	Set for Parity Bit	EVEN, ODD, NO PARITY
F-32	Set for transmitting mode	Continous, safe, accumulate, command
F-33	Set for transmitting date format	weight, weight+time
F-34	Insert for STX of transmitting data	Non, insert
		Non-use(RS422/485), USE

**(50 Group - For the format of BCD DATA OUT )**

F-50	Selection output weight	display weight, gross, net weight
F-51	BCD OUT Polarity	Positive / Negative

**(60 Group - For the setting of Analog Out format)**

F-60	Selection output weight	display weight, gross, net weight
F-61	Analog out basic weight selection	Max weight, basic weight
F-62	Analog out polarity	Positive / Negative
F-63	Analog out basic weight preset	Max output basic value preset

**(70 Group - For the setting of printer format)**

F-70	Choose auto or manual printing	Automatic / Manual
F-71	Set for printing type	Consecutive / Individual
F-72	Set for line feed after printing	1 Count = 1 Line (0-99)

**(90 Group)**

F-90	Set for identification number	00 -- 99
F-95	Set for the date	yy-mm-dd with centronic parallel board
F-96	Set for the time	hh-mm-ss with centronic parallel board
F-98	Confirm the basic zero A/D count	
F-99	Confirm the SPAN constant value	

**11. FS-8000A OUTPUT MODE AND INPUT MODE**

<i>External input mode</i>					
	<del>COM</del>	1	2	3	4
F-15	0	ZERO	TARE	NET	GROSS
	1	ZERO	TARE	PRINT	NET/GROSS
	2	ZERO	TARE	START	STOP
	3	BCD 10 <sup>0</sup>	BCD 10 <sup>1</sup>	START	STOP

<i>External output mode</i>							
	<del>COM</del>	1	2	3	4	5	6
F-16	0	1st	2nd	3rd	4th	End	Empty
	1	No use	No use	No use	No use	No use	No use