BAGGING COTROLLER – DY PAC+

OPERATION MANUAL

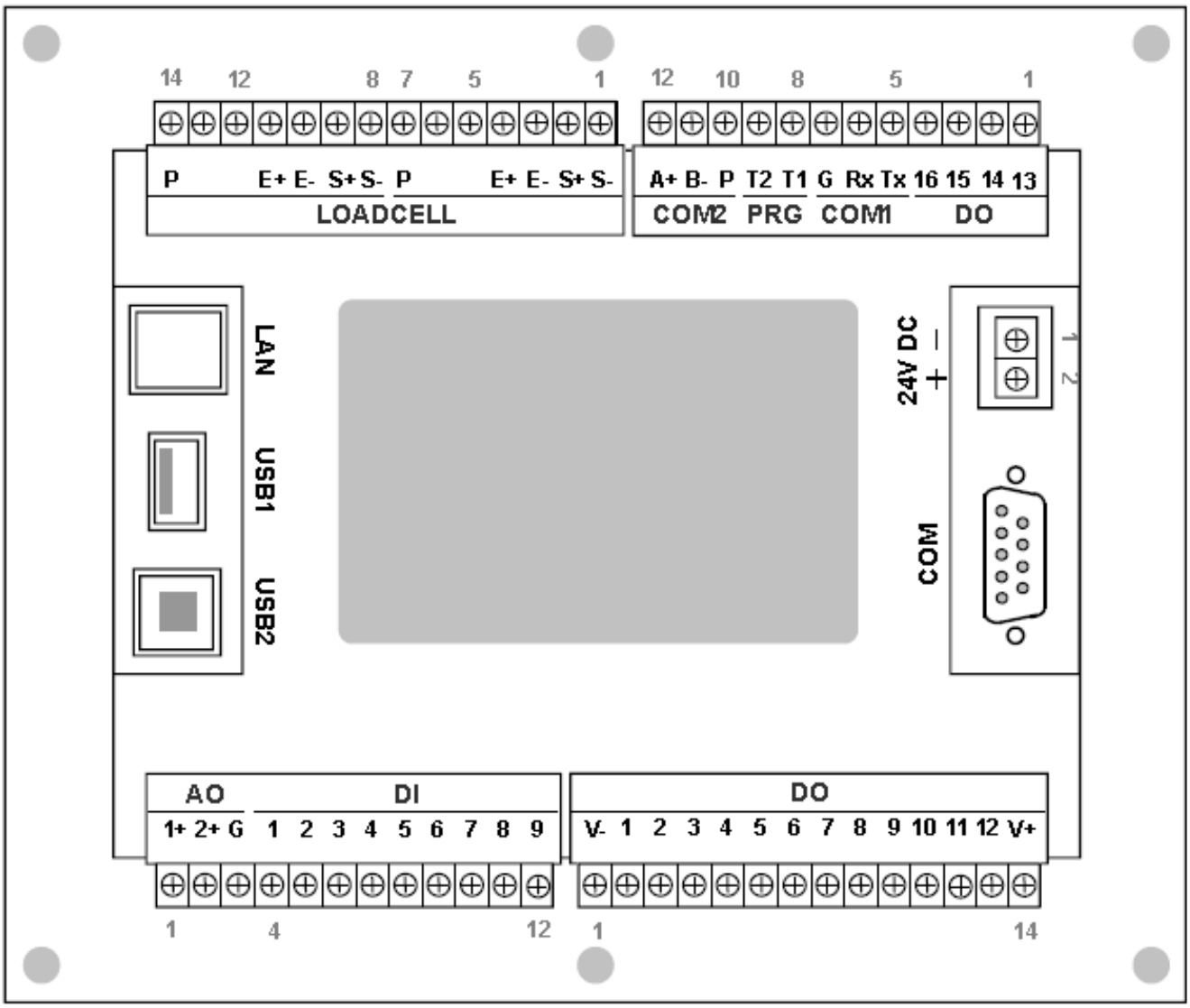
LOGIN -

Name	Operation	Note
【Login】	User Login. Exfactory Passwords: ✧ Operator: None. ✧ Engineer: 0. ✧ Administrator: 1.	Operation 'Main Menu / F5 User / Password / PSW Set' for Modifying Password.
【User Name】	After password inputted, the matching User Name will be displayed.	✧ Operator: User with lowest authorization. ✧ Engineer: User with higher authorization. ✧ Administrator: User with highest authorization.
【Enter】	Enter 'Main Operation Interface'.	Operation 'Main Menu / F5 User / Password / Login [Logoff]' for Re-login [Logoff].

OPERATION ACCESS –

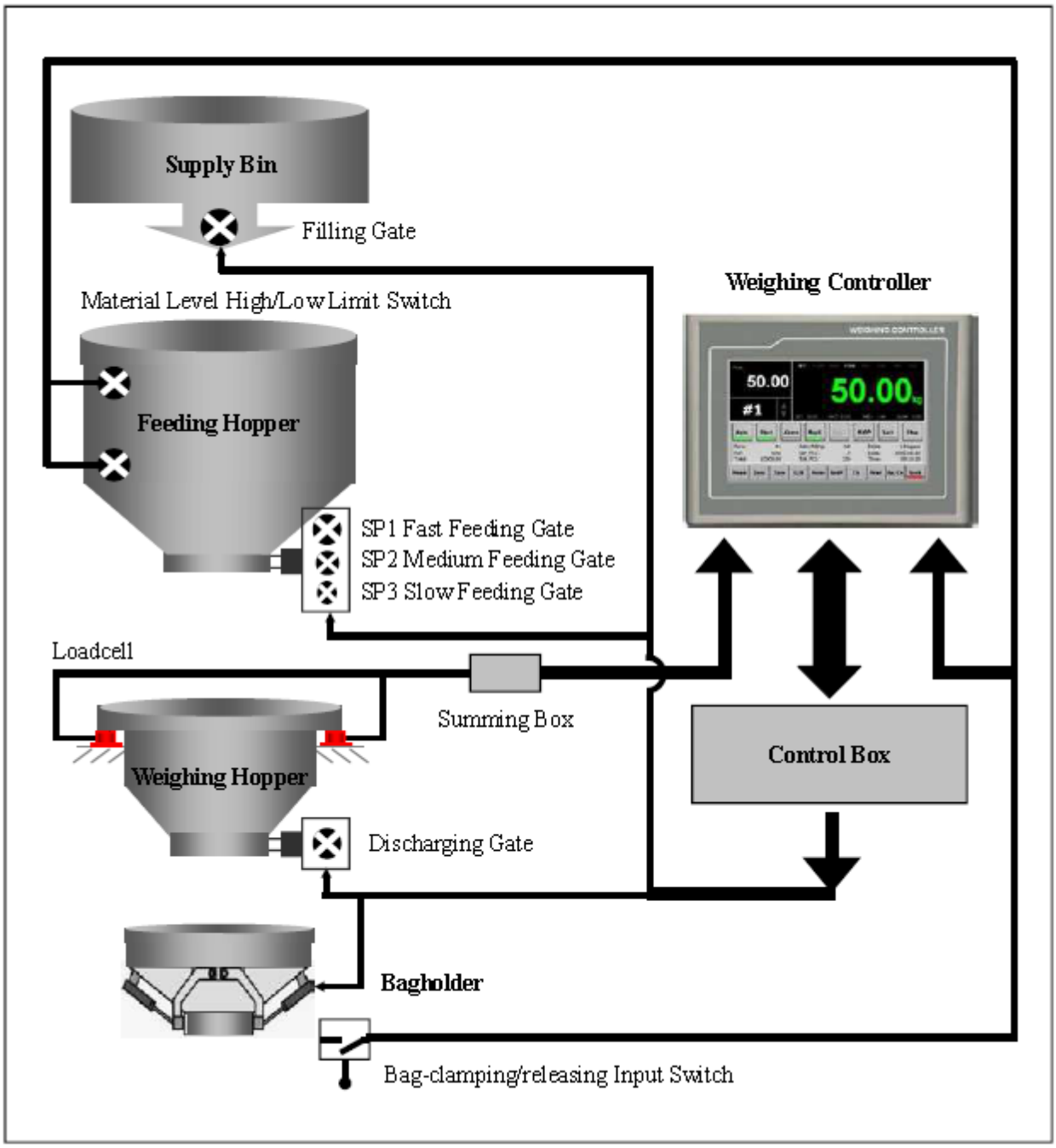
Name	Operation	State Indicator	Authorization
【Auto】	Auto / Manual [Emergency Stop] switch. The operating button will be valid only when parameter [326] 'Manual/Auto DI Type' = '0: Push Button'.	Green: Auto state. Grey: Manual state.	All Users
【Start】	Start. 'Auto/Stop' state: Start. In 'Auto/Running' process: Clear Alarm [Deviation Alarm Acknowledge]. 'Auto/Pause' state: Clear Alarm & Recover Running.	Green: Running state. Blinking Green: Pause state. Grey: Stop state.	
【Alarm】	Alarm Query / Clear Alarm. 'Auto/Pause' state: Recover Running after clearing alarm.	Red: Alarm state.	
【Bag】	Bag-clamping/releasing Request.	Green: Bag-clamping state. Grey: Bag-releasing state.	
【M.OP】	Enter Manual Operation Interface.	Green: Manual state.	
【Last】	Last Batch [Normal Stop]. Stop after the present batch finished.	Blinking Red.	
【Stop】	Emergency Stop.		
【Menu】	Enter Main Menu.		
【Zero】	Zero Fine Adjustment [No Power-down Protection].	Display Gross Weight.	
【Tare】	✧ [Tare]: Manual Tare [No Power-down Protection]. ✧ [Preset]: Preset Tare Weight [Power-down Protection]. ✧ [Clear]: Reset Tare Weight to Zero [Power-down Protection].	Display Net Weight.	
【G/N】	Gross Weight / Net Weight display switch.		
【Form】	Present Working Formula No. Selection.		
【SetP】	#1 &#2 Target Value Setting.		
【Clear】	Clear Screen: Clear the display values of Feeding Weight, Totalized Weight and Batch Count without effecting 'Hour Records'.		Engineer Administrator
【Print】	Report Print: ✧ [Batch]: Print Present Batch Record. ✧ [Total]: Print Totalizing Report. ✧ [Formula]: Print Present Working Formula.		All Users
【En/Cn】	English/Chinese display switch.		
【Lock】	Screen-locking: Locking/unlocking the operating buttons of main display interface. Auto Screen-locking: Refer to parameter [901].	Blinking Red: Locked. Grey: Unlocked.	

CONNECTION DETAILS –



Weigher #1 Loadcell Port [LOADCELL1]		
1	S-	Weighing Signal [mV] Input -.
2	S+	Weighing Signal [mV] Input +.
3	E-	Excitation Voltage -.
4	E+	Excitation Voltage + [DC5V].
5		Unused.
6		Unused.
7	P	Shield Ground.

COMPLETE SYSTEM DIAGRAM –



SYSTEM SET UP – MENU SCREEN

FUNCTIONS –

Main Menu	Second Menu	Description	Authorization
F1 SET	Scale	Scale parameters setting.	Engineer Administrator
	Calibration	Calibration parameters setting.	
	Formula	Present working formula parameters setting.	
	Mode	Working mode parameters setting.	
	Timer	Timer parameters setting.	
	Comm.	Communication parameters setting.	
	Display	Display and operation interface parameters setting.	
F2 CAL	1 Zero Cal.	Zero Calibration without loading on the weigher to correct Zero Value.	
	2 Load Cal.	Load Caliration with loading standard weights on the weigher to correct Span Coefficient.	
	3 Loss Cal.	Loss Caliration to correct Span Coefficient acccording to the weight of the materials discharged from the weighing hopper.	
F3 DATA	Real-time	Real-time Data Query.	All Users ['Clear' only for Engineer & Administrator]
	Batch Rec.	Historical Batch Records Query / USB Copy [Excel Format] / Clear.	
	Hour Rec.	Hour Records Query / USB Copy [Excel Format] / Clear.	
F4 CLS		Clear all of the Historical Batch Records and Hour Records.	Engineer Administrator
F5 USER	Password	Login/Password Set/Logoff. Exfactory Passwords: Operator: None; Engineer: 0; Administrator: 1.	All Users
F6 FAC	Hardware	Hardware Test.	Administrator
	I/O Test	I/O Test.	
	Part-Default	Reset partial parameters to default values.	
	All-Default	Reset all parameters to default values.	
	AO Adj.	AO Zero/Full Adjustment and AO Linearity Test.	
	Para. Backup	Parameter Backup.	
	Para. Recover	Parameter Recover.	
F7 TIME		Date&time Setting.	Engineer Administrator
F8 FORM		Formula management.	
F9 I/O		DI/DO/AO Function Definition. 'Part-Default' operation has no effect on I/O parameters.	Administrator
MAIN		Return to Main Display Interface.	All Users

CALIBRATION –

Operation Steps:

- Step0: Press the button【#1】/【#2】to let its status bar being green for selecting 'Weigher No.'.
- Step1: Let the weigher at unloading state. After Weight Display Value being stable and the status bar of button【Save】being green, press button【Save】.
- If the new 'Zero Value' is not in its allowed range, the operation【Save】will be invalid.

Sign	Data	Sign	Data
Big Digits	Real-time Weight Value [Weight Unit]		
Org. Zero	The saved 'Zero Value'	AD Value	Real-time AD Value of weighing signal
Variation	Zero Variation = AD Value – Zero Value	Motion Stable	Weight is dynamic changing Weight is stable

Do Load Caliration with loading standard weight on the weigher to correct Span Coefficient. The loading weight should be bigger than 50% of Scale Capacity value.

Operation Steps:

- Step0: Press the button【#1】/【#2】to let its status bar being green for selecting 'Weigher No.'.
- Step1: Load standard weights on the weigher. Press button【Weight】to input 'Calibrating Weight' value.
- Step2: After Weight Display Value being stable and the status bar of button【Save】being green, press button【Save】.
- If the loading weight is too small [AD Value ≤ Zero Value], the operation【Save】will be invalid.

Sign	Data	Sign	Data
Big Digits	Real-time Weight Value [Weight Unit]		
Org. Span	The saved 'Span Coefficient' value	AD Value	Real-time AD Value of weighing signal
C. Weight	Calibrating Weight = Weight of Standard Weights	Motion Stable	Weight is dynamic changing Weight is stable

RECIPEE SETTING –

No.	Sign	Range	Default	Description
200	Present Working Formula No.	1~10	1	**Present Working Formula No.**
201	#1 Target Value	0~60000	5000	#1 **Target Value** Set value = 0: The feeding system #1 will not work.
202	#1 SP1 Initial Lead Value	0~60000	1000	#1 **SP1 Initial Lead Value for Fast Feeding** Set value = 0: The DO switch 'SP1 Fast Feeding' will not participate in the feeding process. Set value > 0: When 'Feeding Weight≥(Target Value—SP1 Lead)' in the feeding process, the DO switch 'SP1 Fast Feeding' will turn off automatically. The auto-feeding process of the first batch after 'Start' signal inputted: ✧ If 'Net Weight ≥(Target Value – SP3 Fall)', then the auto-feeding process of the first batch will be skipped. ✧ If '(Target Value × 50%)≤Net Weight≤(Target Value – SP3 Fall)', then the DO switches 'SP3 Slow Feeding' and 'SP2 Medium Feeding' will not participate in the auto-feeding process of the first batch, and only the DO switch 'SP3 Slow Feeding' will do.
203	#1 SP2 Initial Lead Value	0~60000	100	#1 **SP2 Initial Lead Value for Medium Feeding** Set value = 0: The DO switch 'SP2 Medium Feeding' will not participate in the feeding process. Set value > 0: When 'Feeding Weight≥(Target Value—SP2 Lead)' in the feeding process, the DO switch 'SP2 Medium Feeding' will turn off automatically.
204	#1 SP3 Fall Value	0~60000	50	#1 **SP3 Fall Value for Slow Feeding** When 'Feeding Weight≥(Target Value —SP3 Fall)' in the feeding process, the DO switch 'SP3 Slow Feeding' will turn off automatically. Note: It has one more decimal than 'Target Value'.

No.	Sign	Range	Default	Description	REG
205	#2 Target Value	0~60000	5000	#2 **Target Value** Set value = 0: The feeding system #2 will not work.	40209
206	#2 SP1 Initial Lead Value	0~60000	1000	#2 **SP1 Initial Lead Value for Fast Feeding**	40211
207	#2 SP2 Initial Lead Value	0~60000	100	#2 **SP2 Initial Lead Value for Medium Feeding**	40213
208	#2 SP3 Fall Value	0~60000	50	#2 **SP3 Fall Value for Slow Feeding**	40215
209	Positive Deviation	0~60000	5	**Positive Deviation Permission Value** Positive Deviation = Final Feeding Weight – Target Value. If 'Positive Deviation > Permission Value', the DO switch 'Positive Deviation Alarm' will turn on automatically.	40217
210	Negative Deviation	0~60000	5	**Negative Deviation Permission Value** Negative Deviation = Target Value – Final Feeding Weight. If 'Negative Deviation > Permission Value', the DO switch 'Negative Deviation Alarm' will turn on automatically.	40219
211	Non-load Zero Range	0~60000	200	**Non-load Zero Range** **Hopper-weighing Mode:** After the auto-discharging process ended, 'Net Weight≤Non-load Zero Range' is used as the judging condition that the materials in the weighing hopper have been discharged completely. **Bag-weighing Mode:** In the process of auto-releasing bag, 'Net Weight≤Non-load Zero Range' is used as the judging condition that the packing bag filled with materials has separated from the bagholder.	40221
212	**Target Batch**	0~9999	0	**Target Batch** Set value = 0: No judging 'Target Batch Finished'. Set value > 0: After Batch Count reached to this set value, the controller will display prompt message.	40223

TIMERS SETTING –

No.	Sign	Range	Default	Description	REG
400	T1 After Clamping Bag	0.00 ~9.99	0.50	**Delay Time After Clamping Bag T1** [s] After 'Bag-clamping Request' DI signal took effect, the DO switch 'Clamping/Releasing Bag' will turn on automatically to clamp the packing bag. The delay time T1 is used for ensuring the action of 'Clamping Bag' finished. **Hopper-weighing Mode:** Only after the action of 'Clamping Bag' being finished, it's allowed to enter the auto-discharging process. The Bag-clamping/releasing operation is invalid in auto-discharging process. **Bag-weighing Mode:** Only after the action of 'Clamping Bag' being finished, it's allowed to enter the auto-feeding process. The Bag-clamping/releasing operation is invalid in auto-feeding process.	40401
401	T2 Before ZERO/TARE	0.00 ~9.99	2.00	**Delay Time Before ZERO/TARE T2** [s] Delay Time Before Auto Zero Fine Adjustment & Auto Tare. If Auto Zero Fine Adjustment and Auto Tare (set via parameter [302]&[303]) are not necessary before feeding, the time T2 will not be delayed. T2 delaying process: If the delayed time is up to 1s, then once the weight display value is stable, the T2 delaying process will end immediately. Refer to parameter [108] 'Stablity Judging Range' and [109] 'Stablity Judging Time'. Then the controller will do 'Auto Zero Fine Adjustment' or 'Auto Tare'.	40403
402	T3 Before Feeding	0.00 ~9.99	0.00	**Delay Time Before Feeding T3** [s] After the time T3 delayed, the feeding process will start.	40405
403	T4.SP1 Comparing-prohibitted	0.00 ~9.99	0.50	**Comparing-prohibitted Time T4.SP1** [s] When the process of 'Fast Feeding' starts, the impact of falling materials will make the weighing hopper vibrating, so it's prohibitted to compare Feeding Weight with SP1 Setpoint in the time T4.SP1.	40407

No.	Sign	Range	Default	Description	REG
404	T4.SP2 Comparing-prohibitted	0.00 ~9.99	0.50	**Comparing-prohibitted Time T4.SP2** [s] When the process of 'Fast Feeding' stops, the flow sudden-change of falling materials will make the weighing hopper/bag vibrating, so it's prohibitted to compare Feeding Weight with SP2 Setpoint in the time T4.SP2.	40409
405	T4.SP3 Comparing-prohibitted	0.00 ~9.99	0.80	**Comparing-prohibitted Time T4.SP3** [s] When the process of 'Medium Feeding' stops, the flow sudden-change of falling materials will make the weighing hopper/bag vibrating, so it's prohibitted to compare Feeding Weight with SP3 Setpoint in the time T4.SP3. This parameter is invalid to the processes of 'Auto SP3 Re-feeding' and 'Manual SP3 Re-feeding'.	40411
406	T5 for Stabilizing Weight	0.00 ~9.99	2.00	**Wait Time for Stabilizing Weight T5** [s] When 'SP3 Slow Feeding', 'Auto SP3 Re-feeding' or 'Manual SP3 Re-feeding' stops, some materials have left the feeding hopper but still in mid-air, so it's necessary to delay the time T5 for ensuring all of the materials in mid-air fell into the weighing hopper or packing bag. T5 delaying process: If the delayed time is up to 1s, then once the weight display value is stable, the T5 delaying process will end immediately. Refer to parameter [108] 'Stablity Judging Range' and [109] 'Stablity Judging Time'. Then the controller will do Final Feeding Weight Detection, Deviation calculation and Deviation alarm. Note: The smaller set value of T5 can improve the packing speed without affecting the packing accuracy, but it may lead to the display value and record value of Final Feeding Weight being different with the actual value. If it's necessary to display and record the accurate value of Final Feeding Weight, the set value of T5 should be reasonable.	40413

No.	Sign	Range	Default	Description	REG
407	T6 After Stabilizing Weight	0.00 ~9.99	0.00	**Holding Time After Stabilizing T6** [s] **Hopper-weighing Mode:** After the time T6 delayed, the DO switch 'Discharging' will turn on automatically to open the discharging gate and enter the discharging process. **Bag-weighing Mode:** After the time T6 delayed, the process of bag-shaking will start if it is allowed by setting parameter [320~325]. **Parameter [327]= '0: Auto Bag-releasing':** After the process of bag-shaking ended, the DO switch 'Clamping/Releasing Bag' will turn off automatically to release the packing bag. **Parameter [327]= '1: Manual Bag-releasing':** After the process of bag-shaking ended, the DO switch 'Clamping/Releasing Bag' will be turned off by the DI signal of 'Bag-releasing Request' for releasing the packing bag.	40415
408	T7a for Opening Discharging Gate	0.00 ~9.99	0.50	**Max.Time for Opening Discharging Gate T7a** [s] **Used for APP1 Hopper-weighing Mode.** In the discharging process, once the discharging gate's opening time is up to T7a or the DI switch 'Discharging Gate Opened in Place' turns on, it's considered that the discharging gate has been opened to the position with max. gap.	40417
409	T7 Before Closing Discharging Gate	0.00 ~9.99	0.50	**Delay Time Before Closing Discharging Gate T7** [s] **Used for APP1 Hopper-weighing Mode.** After 'Net Weight ≤ Non-load Zero Range' and then the time T7 delayed for ensuring all of the materials in the weighing hopper discharged completely, the discharging gate will be closed automatically.	40419

No.	Sign	Range	Default	Description	REG
410	T8 for Closing Discharging Gate	0.00 ~9.99	0.50	**Max. Time for Closing Discharging Gate T8** [s] **Used for APP1 Hopper-weighing Mode.** In the process of closing discharging gate, once the closing time is up to T8 or the DI switch 'Discharging Gate Closed in Place' turns on, it's considered that the discharging gate has been closed fully. Then the next ration feeding process will start automatically. In the meantime, the Bag-shaking process will start if it is allowed by setting parameter [320~325]. **Parameter [327]= '0: Auto Bag-releasing':** After the Bag-shaking process process ended, the DO switch 'Clamping/Releasing Bag' will turn off automatically to release the packing bag. Refer to parameter [328]. **Parameter [327]= '1: Manual Bag-releasing':** After the Bag-shaking process process ended, the DO switch 'Clamping/Releasing Bag' will be turned off by the DI signal of 'Bag-releasing Request' for releasing the packing bag.	40421
411	T9 Interval of Bag-Clamp /Release	0.00 ~1.00	0.50	**Time Interval of Bag Clamping/Releasing T9** [s] After 'Bag-clamping/releasing Request' signal took effect, it will not be responsed again in the time T9 for avoiding misoperation of 'Bag-clamping /releasing'.	40423
412	T10 Max Feeding Time	0~999	10	**Max. Feeding Time T10** [s] Set value = 0: No Limit. Set value > 0: Once the feeding time ⩾ T10, the alarm signal 'Feeding Overtime' will be outputted.	40425

No.	Sign	Range	Default	Description	REG
413	T11 Max. Time of Weight to Zero	0~999	5	**Max. Time of Weight Returning to Zero T11** [*s*] **APP1 Hopper-weighing Mode:** **Max. Discharging Time T11** [*s*] Set value = 0: No Limit. Set value > 0: Once 'Discharging Time ⩾ T11', the alarm signal 'Discharging Overtime' will be outputted. **Discharging Time:** The time from the discharging process starting to 'Net Weight ⩽ Non-load Zero Range'. **Bag-weighing Mode:** **Max. Bag-releasing Time T11** [*s*] Set value = 0: No Limit. Set value > 0: Once 'Bag-releasing Time ⩾ T11', the alarm signal 'Bag-Releasing Overtime' will be outputted. Once 'Net Weight ⩽ Non-load Zero Range', the 'Bag-Releasing' DO signal will be outputted again and the 'Bag-Releasing' process will end automatically. **Bag-releasing time:** The time from the bag-releasing process starting to 'Net Weight ⩽ Non-load Zero Range'.	40427
414	T12 Max.Filling Time	0~9999	600	**Max. Time of Filling Materials into Feeding Hopper T12** [*s*] Set value = 0: No Limit. Set value > 0: Once 'Filling Time ⩾ T12', the process of 'Filling Materials into Feeding Hopper' will end with 'Filling Overtime' alarm automatically. If the DI signal 'Filling Materials into Feeding Hopper' is used, only after the DI turned on, it's allowed to Filling Materials into Feeding Hopper automatically at Manual/Auto state. If the DI signal is not used, it's allowed to Filling Materials into Feeding Hopper automatically at Manual/Auto state. Auto Filling Process: ✧ When the DI switch 'Material Level Low Limit' turns on, the DO switch 'Filling Materials into Feeding Hopper' will turn on to open the Filling Gate automatically, and the timer of 'Filling Time' will start. ✧ When the DI switch 'Material Level High Limit' turns on or 'Filling Time ⩾ T12', the DO switch 'Filling Materials into Feeding Hopper' will turn off to close the Filling Gate and the process of 'Filling Materials into Feeding Hopper' will end automatically.	40429