

AD-4405, 4406, 4407 *Comparator*

INSTRUCTION MANUAL

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Introduction

The AD-4405/4406/4407 indicators have a very versatile comparator/setpoint feature which is standard to each model. There are 6 different Comparison, (check weighing) modes and 6 different Setpoint, (batching modes).

This manual details the procedures to set up the internal Functions and describes the steps required by the end user to be able to use the comparator feature efficiently.

Each Comparison/Setpoint mode is detailed individually describing which inputs and outputs are used and a timing diagram to show when the outputs and display indicators are activated.

Relay Outputs and External Control Inputs

To utilise the Relay outputs and External Inputs, Option 05 (OP 05) must be installed.

----- See page 7 for wiring examples and ratings. -----

The comparator settings, Function F22 of the AD-4405/4406/4407 have the same functions.

The AD-4405 and AD-4407 have dedicated Key Switches to enter SETPOINT values and to START and STOP the batch in the automatic batching modes, Simple Batch 1 to 3.

This manual details the setting of the AD-4406 which has a limited number of front panel Key Switches. However it has two programmable Key Switches, F1 and F2.

----- See next page for programming details of the F1 and F2 Keys -----

In this manual, START refers to either using the START Key Switch or an EXT input programmed to be the START input.

STOP refers to either using the STOP Key Switch or an EXT input programmed to be the STOP input.

Programming the F1 and F2 Key Switches of the AD-4406

In order for the AD-4406 to be able to use SETPOINT values the F1 or F2 Key Switch must be programmed to enter the SETPOINT values. F1 and F2 can also be programmed to START and STOP the batch in the automatic batching modes, Simple Batch 1 to 3.

Function, F10 and F11 are used to program the F1 and F2 Key Switches respectively.

Each Key switch can be programmed to perform one or more operations.

A momentary press of the Key Switch activates the first operation.

Pressing the Key Switch for more than 2 seconds activates the second operation.

The first operation is set by F10/F11, 1X.

The second operation is set by F10/F11, 2X. (X represents the operation).

For example; F1 is programmed to be START and SETPOINT.

F10=16,25,30.... (The first operation is 6, "START COMPARATOR/BATCH", the second operation is 5, "SETTING SETPOINT"), the third operation is 0, (NO OPERATION).

F2 is programmed to be STOP.

F11=17,20.... (The single operation is 7, "STOP COMPARATOR/BATCH), the second operation is 0, (NO OPERATION).

Programming the EXT inputs of the AD-4405/06/07

Function, F13, F14 and F15 are used to program EXT1, EXT2 and EXT3 respectively.

For example;

F13=10, EXT1 is programmed to be START BATCHING.

F14=11, EXT2 is programmed to be STOP BATCHING.

F15= 3, EXT3 is programmed to be NET/GROSS KEY.

See page 5 for a detailed procedure to set the Functions for Simple Batch 1 using AD-4406 with F1 and F2 Key Switches programmed as above and EXT1, EXT2 and EXT3 programmed to be START, STOP and NET/GROSS.

WARNING!

When using the BUZZER during Simple Batch 1, 2 or 3, the EXT input programmed to be "STOP BATCHING" will first cancel the BUZZER if the BUZZER is sounding during a Batch.

It will not stop the Batch.

To STOP the batch the EXT input must be activated again.

If the buzzer is sounding, The F1 or F2 key will stop both the buzzer and the batch, (at the same time) with a single press if it is programmed to "STOP COMPARATOR, BATCH".

To overcome this situation, program the F1 or F2 Key Switch, F10 or F11=17, "STOP COMPARATOR, BATCH".

Change the EXT input to be used to stop the batch, from "STOP BATCHING" to "F2 Key".

For example, F11=17, F2 Key="STOP COMPARATOR, BATCH".

Change F14=11, EXT2="STOP BATCHING", to F14=5, EXT2= "F2 Key".

Comparator Functions Setup

Example: Set AD-4406 Functions to use Simple Batch 1 (Single Feed). (See next page for Function List)

F1 Key used as START and SETPOINT setting.

F2 Key used as STOP.

EXT1 is START input.

EXT2 is STOP input.

EXT3 is NET/GROSS input.

Hi Relay used for Single Feed.

OK Relay used for Batch Finish.

Lo Relay used for Zero Band, (Set to 100kg).

(Calibration: 800kg x 1kg division, for example only. These values also used in the timing diagrams).

1. With the display off, press and hold the **NET/GROSS** key and press the **ON/OFF** key, hold down the **NET/GROSS** key until the display shows **F 00**.
2. Press the < key to move the flashing digit to the left hand zero.
Press the ^ key once to display **F 10**.
3. Press the **ENTER** key to display **F 10 13**. (The two digits to the right will be flashing, 13 is the factory default value.) Press the ^ key to increase the value to display **F 10 16**. (If you set the wrong number just keep pressing the ^ key, the numbers will cycle around again.) This step programs the first operation of the F1 key to be used to START the batch.
4. Press the < key to display **F 10 20**. Press the ^ key to change the value to display **F 10 25**.
This step programs the second operation of the F1 key to be used to set the SETPOINT values later.
5. Press the **ENTER** key to display **F 11**. Press the **ENTER** key to display **F 11 11**. (The two digits to the right will be flashing, 11 is the factory default value.) Press the ^ key to increase the value to display **F 11 17**. This step programs the first operation of the F2 key to be used to STOP the batch.
6. Press the **ENTER** key to display **F 12**. Press the ^ key once to display **F 13**.
7. Press the **ENTER** key to display **F 13 0**. Press the ^ key to change the value to display **F 13 10**.
This step programs the EXT1 input to be used to START the batch.
8. Press the **ENTER** key to display **F 14**.
9. Press the **ENTER** key to display **F 14 0**. Press the ^ key to change the value to display **F 14 11**.
This step programs the EXT2 input to be used to STOP the batch.
10. Press the **ENTER** key to display **F 15**.
11. Press the **ENTER** key to display **F 15 0**. Press the ^ key to change the value to display **F 15 3**.
This step programs the EXT3 input to be used to change NET/GROSS.
12. Press the **ENTER** key to display **F 16**.
13. Using the < and ^ keys, select **F 22**.
14. Press the **ENTER** key to display **F 22 0**. Press the ^ key to change the value to display **F 22 10**.
(This will set the comparator to Simple Batch 1 function).
15. Press the **ENTER** key to display **F 23**.
16. Press the **ENTER** key to display **F 23 11**. Press the < key to display **F 23 21**, then press < key again to display **F 23 31**. Press the ^ key to change the value to display **F 23 30**. (This will force the batch to complete as soon as the weight becomes stable after the Hi relay opens).
17. Press the **ENTER** key to display **F 24**.
18. Press the **ENTER** key to display **F 24 0**. Press the ^ key to change the value to display **F 24 2**.
(This will set the OK Relay to turn on at BATCH FINISH which will stay on until ZERO BAND is reached, if required, the length of the BATCH FINISH output can be set by F25. See Instruction Manual).
19. Press the **ENTER** key to display **F 25**.
20. Press the ^ key to display **F 26**.
21. Press the **ENTER** key to display **F 26 0**. Using the < and ^ keys, set the display to **F 26 100**.
(ZERO BAND weight to 100kg).
22. Press **ENTER** to store the setting, and display **F 30**.
23. Use the **ON/OFF** key to turn the scale off then back on again.

Comparator Functions Setup List		
FUNCTION	SETTING	DESCRIPTION
F10	16, 25	1. F1 Key pressed to "START" 2. F1 Key held for "Setting the setpoint"
F11	17	1. F2 Key pressed to "STOP"
F13	10	Ext input 1, (Start Batching)
F14	11	Ext input 2, (Stop Batching)
F15	3	Ext input 3, (Net/Gross)
F22	10	Comparator set to Simple Batch 1
F23	11,21,30,40	Batch Sub Functions, (see manual)
F24	2	OK Relay used for Batch Finish
F26	100	Zero band weight

Setting the Setpoints

Example: Setting AD-4406 Setpoint values with Simple Batch 1 (Single Feed).

In the example on the previous page, the F1 Key Switch was programmed to perform entry of the Setpoint values as the secondary operation by holding the F1 Key for more than 2 seconds.

Note: The AD-4405 and AD-4407 have a Key Switch Labelled "Setpoint" to enter the Setpoint values.

1. With the scale turned on in normal weighing mode, (*the scale must be displaying a weight*), press and hold the **F1** key. The display will show **0 - F 1**. The last used memory Code number will be flashing on the left.
2. Press the **^** key to select a Code to store the weight values. Codes 1 to 4 can store a set of Setpoint weight values. (**NOTE: Code 0 will be lost when the power is turned off.**)
3. Use the **<** key to change the flashing digit to **F 1**. Press the **ENTER** key to display a flashing **0**. Use the **^** key and **<** key to set the Final Batch Weight value.
Example: display shows **500**. Final Batch Weight is 500kg.
4. NOTE: The **<** Key can be used to directly select any of the setpoint parameters, each press will move to the next parameter. For Simple Batch 1 the **<** key will select **F 1, FF, H 1, L 0, F 1**,....etc.
5. Press the **ENTER** key to display **1 - FF**, with **FF** flashing. Press the **ENTER** key to display a flashing **0**. Use the **^** key and **<** key to set the Free Fall weight value at which point the Hi Relay will turn off. Example: display shows **10**.
(*The Hi Relay will turn off when the weight reaches 500-10kg=490kg*).
6. Press the **ENTER** key to display **1 - H 1**, with **H 1** flashing. Press the **ENTER** key to display a flashing **0**. Use the **^** key and **<** key to set the Over tolerance weight value at which point the Hi Indicator will turn on. Example: display shows **50**. (*The Hi Indicator will turn on if the weight goes over 500+50kg=550kg at the end of the batch*).
7. Press the **ENTER** key to display **1 - L 0**, with **L 0** flashing. Press the **ENTER** key to display a flashing **0**. Use the **^** key and **<** key to set the Under tolerance weight value at which point the Lo Indicator will turn on. Example: display shows **50**. (*The Lo Indicator will turn on if the weight goes under 500-50kg=450kg at the end of the batch*).
8. Press the **ENTER** key to display **1 - F 1**.
9. If you wish to proceed with setting the other Code positions press the **ESC** key to display the flashing Code number. Store comparator values for the other codes repeating steps 2 to 8.
10. When completed storing the comparator values press the **ESC** key to display the flashing Code number. Press the **Enter** Key to select the Code and resume weighing mode.

Comparator I/O Wiring

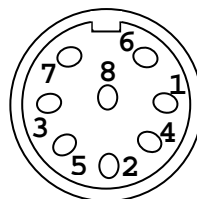
AD-4407 I/O TERMINAL BLOCK

1	2	3	4	5	6	7	8	9	10	11	12	13
●	●	●	●	●	●	●	●	●	●	●	●	●
TXD	RXD	DSR	SG	Hi	OK	Lo	COM OUT	EXT1	EXT2	EXT3	COM IN	FG
RS-232C				RELAY OUTPUT				CONTROL INPUT				CASE

AD-4405 and AD-4406 I/O

PIN	I/O
1	Hi Relay
6	OK Relay
4	Lo Relay
8	Com Out
3	EXT 1 Input
5	EXT 2 Input
7	EXT 3 Input
2	Com In

View of Din Socket in panel,
Solder terminals of cable plug.



Output Relay Ratings

The Output Relays are solid state Photo MOS ICs.

AC or DC powered devices can be driven by the Output Relays.

MAXIMUM VOLTAGE RATING: 50V DC

MAXIMUM CURRENT RATING: 100mA DC

MAXIMUM RESISTANCE: 8 Ohms.

External Input Operation

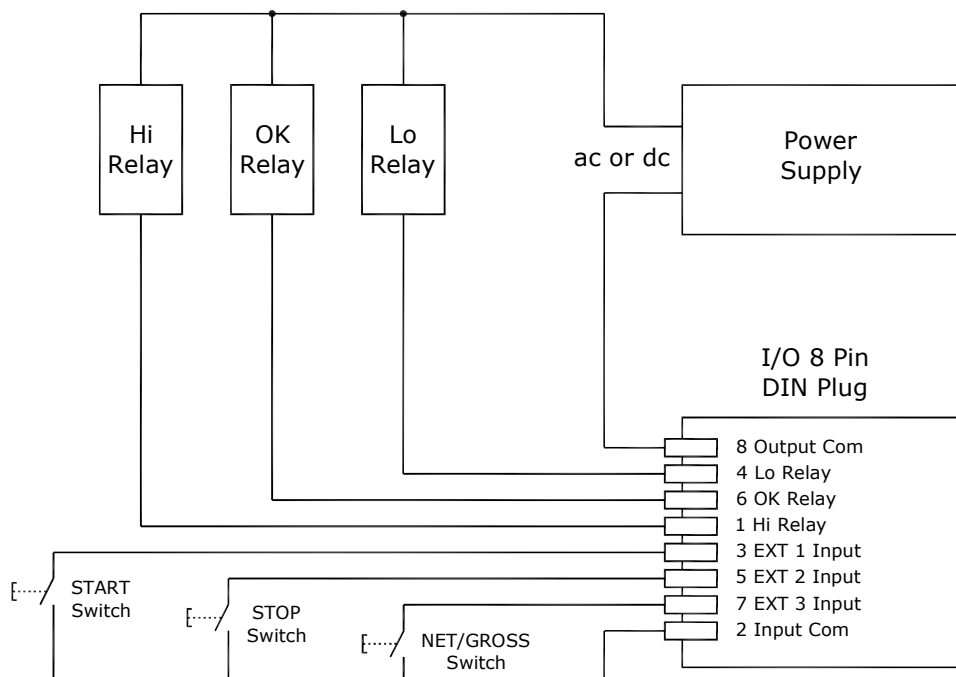
The Input Devices are solid state Photo Isolator ICs

To activate an input, simply connect the INPUT COMMON to the EXT Input terminal.

Ensure the connection is closed (ON) for at least 100ms and opened (OFF) for at least 100ms.

DO NOT CONNECT THE INPUT COMMON TO THE RELAY OUTPUT COMMON.

Wiring example



Upper/Lower Limit Comparison (2 Limits setting)

Set Comparator Function, F22 to 1.

This comparison mode allows for three relay outputs to control the three comparator conditions. The Comparator settings are compared to the DISPLAY WEIGHT value.

The comparator settings are entered as actual weight values relative to ZERO.

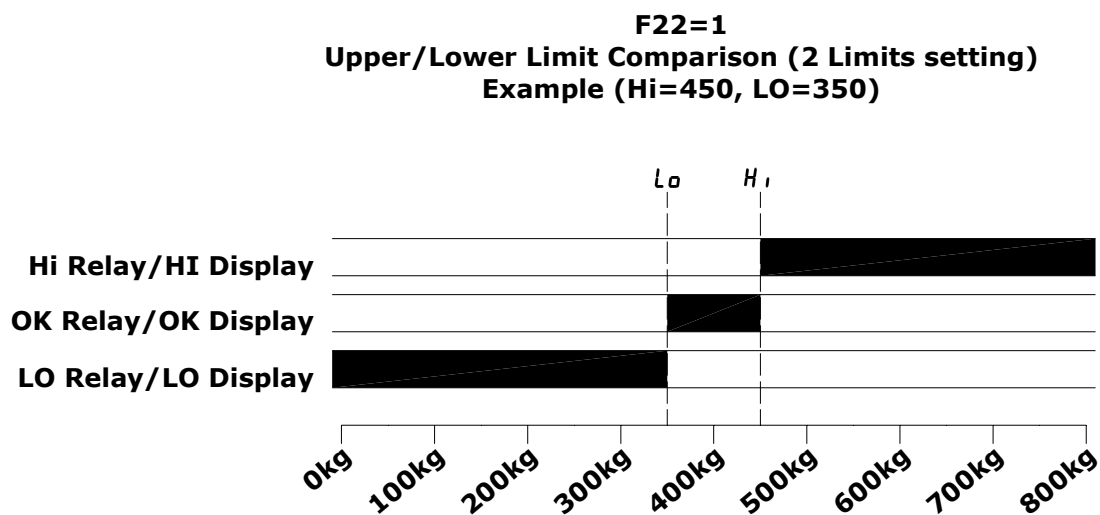
Hi Relay turns on when $\text{DISPLAY} > \text{Hi value}$.

OK Relay turns on when $\text{DISPLAY} \geq \text{Lo value}$ and $\leq \text{Hi value}$.

Lo Relay turns on when $\text{DISPLAY} < \text{Lo value}$.

The BUZZER settings of Function F05 are available at all times.

Upper/Lower Limit Comparison (2 Limits setting) Timing diagram



Upper/Lower Limit Comparison (Target and allowance)

Set Comparator Function, F22 to 2.

This comparison mode allows for three relay outputs to control the three comparator conditions. The Comparator settings are compared to the DISPLAY WEIGHT value.

The comparator settings are entered as weight values relative to the TARGET.

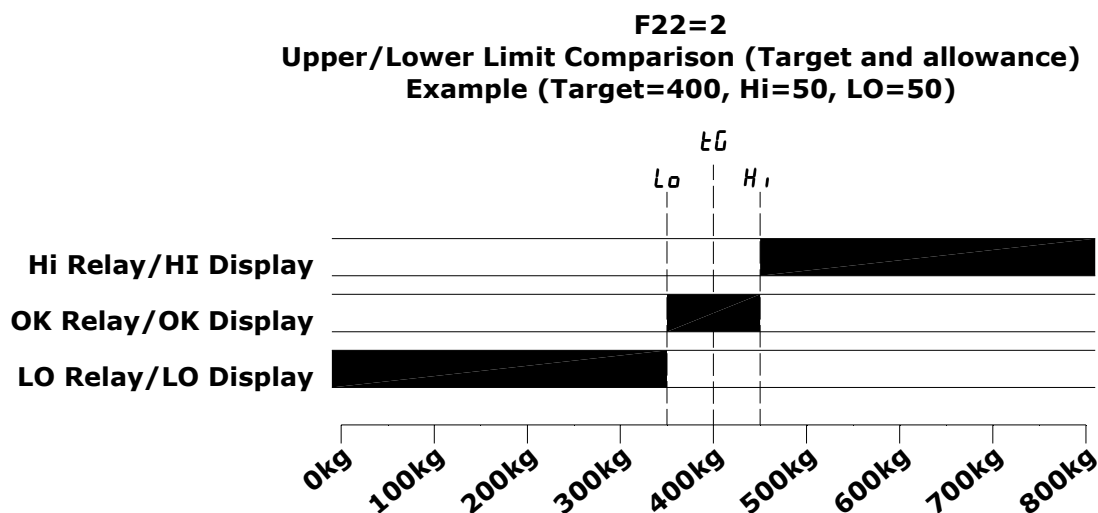
Hi Relay turns on when $\text{DISPLAY} > \text{Hi}$ value.

OK Relay turns on when $\text{DISPLAY} \geq \text{Lo}$ value and $\leq \text{Hi}$ value.

Lo Relay turns on when $\text{DISPLAY} < \text{Lo}$ value.

The BUZZER settings of Function F05 are available at all times.

Upper/Lower Limit Comparison (Target and allowance) Timing diagram



Upper/Lower Limit Comparison (Target and % allowance)

Set Comparator Function, F22 to 3.

This comparison mode allows for three relay outputs to control the three comparator conditions. The Comparator settings are compared to the DISPLAY WEIGHT value.

The comparator settings are entered as an allowance percentage of the TARGET.

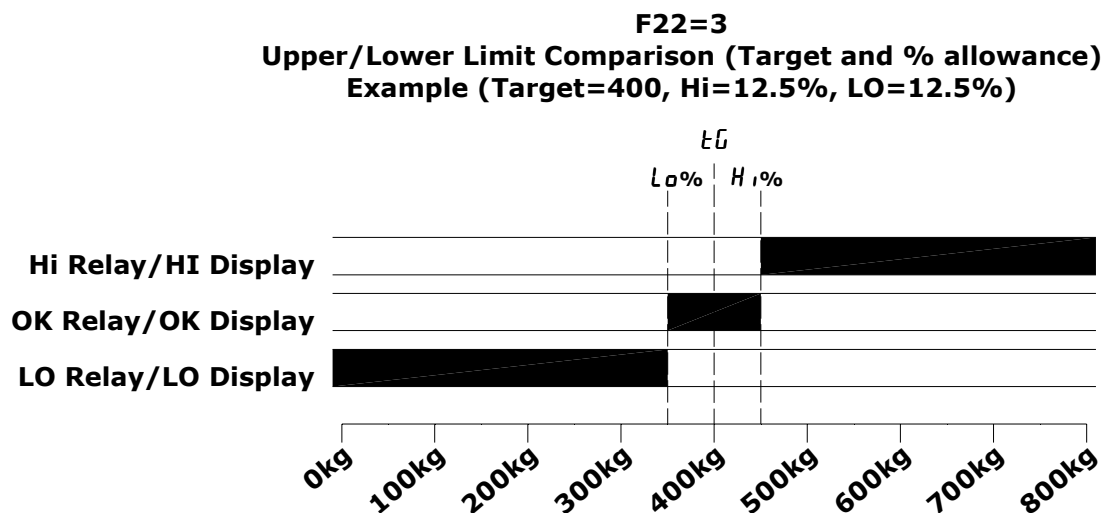
Hi Relay turns on when $\text{DISPLAY} > \text{Hi}$ value.

OK Relay turns on when $\text{DISPLAY} \geq \text{Lo}$ value and $\leq \text{Hi}$ value.

Lo Relay turns on when $\text{DISPLAY} < \text{Lo}$ value.

The BUZZER settings of Function F05 are available at all times.

Upper/Lower Limit Comparison (Target and % allowance) Timing diagram



HH/Hi/OK/Lo/LL Comparison (4 Limits setting)

Set Comparator Function, F22 to 4.

This comparison mode allows for five combinations of relay outputs to control the five comparator conditions. The Comparator settings are compared to the DISPLAY WEIGHT value.

The comparator settings are entered as actual weight values relative to ZERO.

Hi Relay turns on when $\text{DISPLAY} > \text{HH}$ value.

Hi Relay and OK Relay turn on when $\text{DISPLAY} > \text{Hi}$ value.

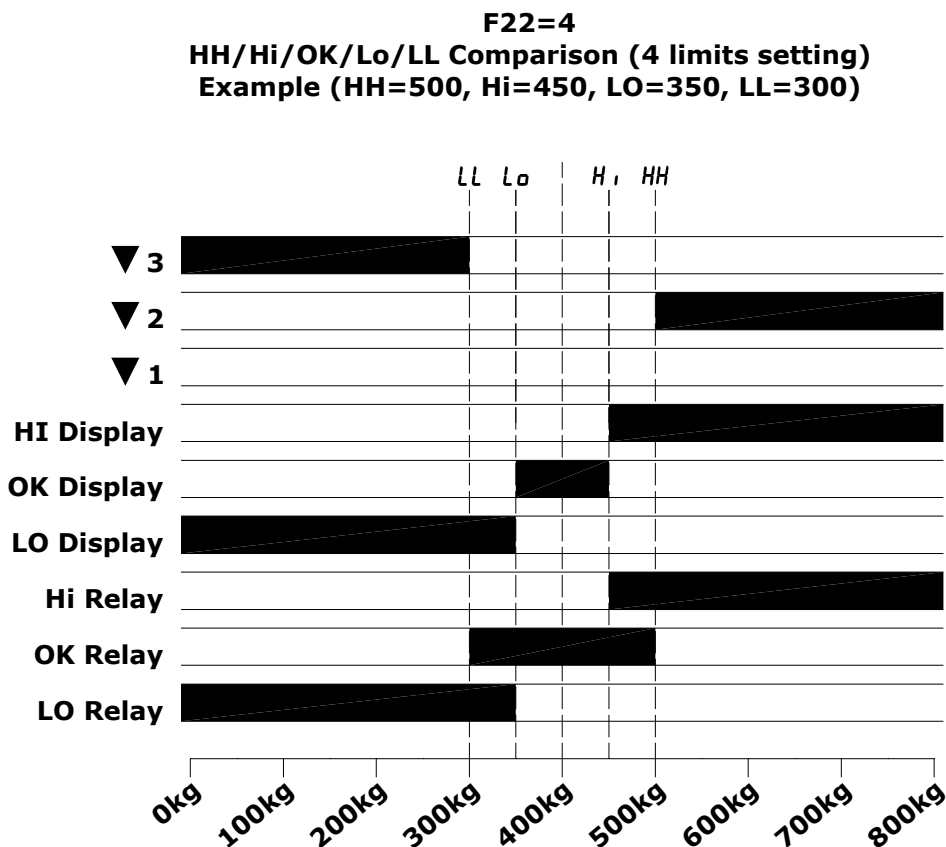
OK Relay turns on when $\text{DISPLAY} \geq \text{Lo}$ value and $\leq \text{Hi}$ value.

Lo Relay and OK Relay turn on when $\text{DISPLAY} < \text{Lo}$ value.

Lo Relay turns on when $\text{DISPLAY} < \text{LL}$ value.

The BUZZER settings of Function F05 are available at all times.

HH/Hi/OK/Lo/LL Comparison (4 Limits setting) Timing diagram



HH/Hi/OK/Lo/LL Comparison (Target and allowance)

Set Comparator Function, F22 to 5.

This comparison mode allows for five combinations of relay outputs to control the five comparator conditions. The Comparator settings are compared to the DISPLAY WEIGHT value.

The comparator settings are entered as weight values relative to the TARGET.

Hi Relay turns on when $\text{DISPLAY} > \text{HH}$ value.

Hi Relay and OK Relay turn on when $\text{DISPLAY} > \text{Hi}$ value.

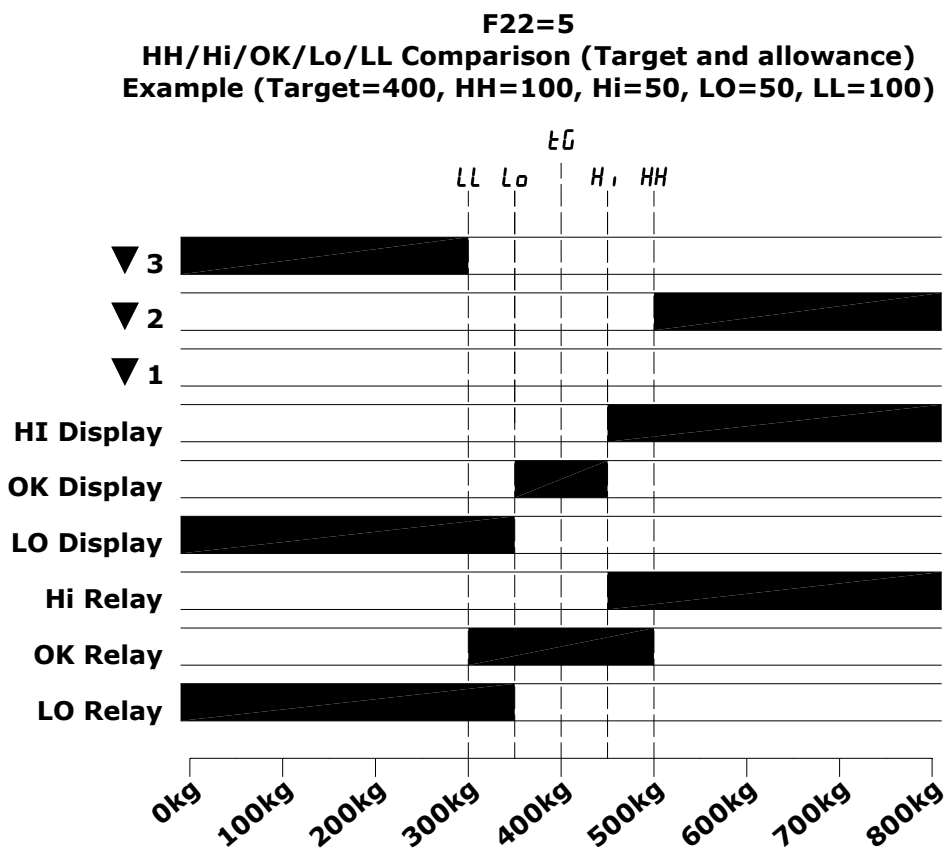
OK Relay turns on when $\text{DISPLAY} \geq \text{Lo}$ value and $\leq \text{Hi}$ value.

Lo Relay and OK Relay turn on when $\text{DISPLAY} < \text{Lo}$ value.

Lo Relay turns on when $\text{DISPLAY} < \text{LL}$ value.

The BUZZER settings of Function F05 are available at all times.

HH/Hi/OK/Lo/LL Comparison (Target and allowance) Timing diagram



HH/Hi/OK/Lo/LL Comparison (Target and % allowance)

Set Comparator Function, F22 to 6.

This comparison mode allows for five combinations of relay outputs to control the five comparator conditions. The Comparator settings are compared to the DISPLAY WEIGHT value.

The comparator settings are entered as an allowance percentage of the TARGET.

Hi Relay turns on when $\text{DISPLAY} > \text{HH}$ value.

Hi Relay and OK Relay turn on when $\text{DISPLAY} > \text{Hi}$ value.

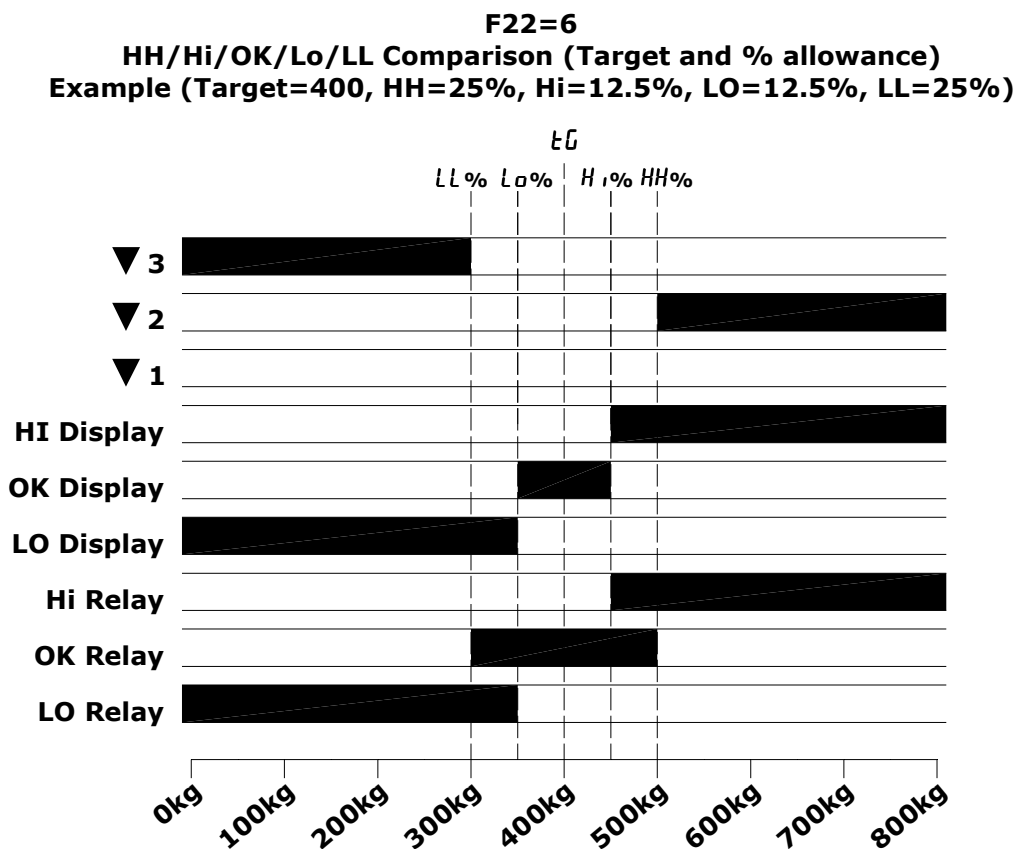
OK Relay turns on when $\text{DISPLAY} \geq \text{Lo}$ value and $\leq \text{Hi}$ value.

Lo Relay and OK Relay turn on when $\text{DISPLAY} < \text{Lo}$ value.

Lo Relay turns on when $\text{DISPLAY} < \text{LL}$ value.

The BUZZER settings of Function F05 are available at all times.

HH/Hi/OK/Lo/LL Comparison (Target and % allowance) Timing diagram



Check Weighing 1 (Setpoint Comparison 1 SINGLE FEED)

Set Comparator Function, F22 to 7.

This batching mode allows for single speed weight batching into a weigh hopper. START is not used. The weight must be tared by the user and the weight reading progresses in the positive direction. The Comparator settings are compared to the NET WEIGHT value.

Hi Relay is used for SINGLE FEED. Active when $NET \geq FINAL-FREE FALL$.

OK Relay can be used for OVER or UNDER as per Function F24, (see below).

Lo Relay is used for ZERO BAND. Active when $GROSS < F26$.

The Hi Relay output turns on when the NET weight reaches the Final-Free Fall value.

The READY indicator is not used.

Function F24 controls the OK relay output, which can be set as follows;

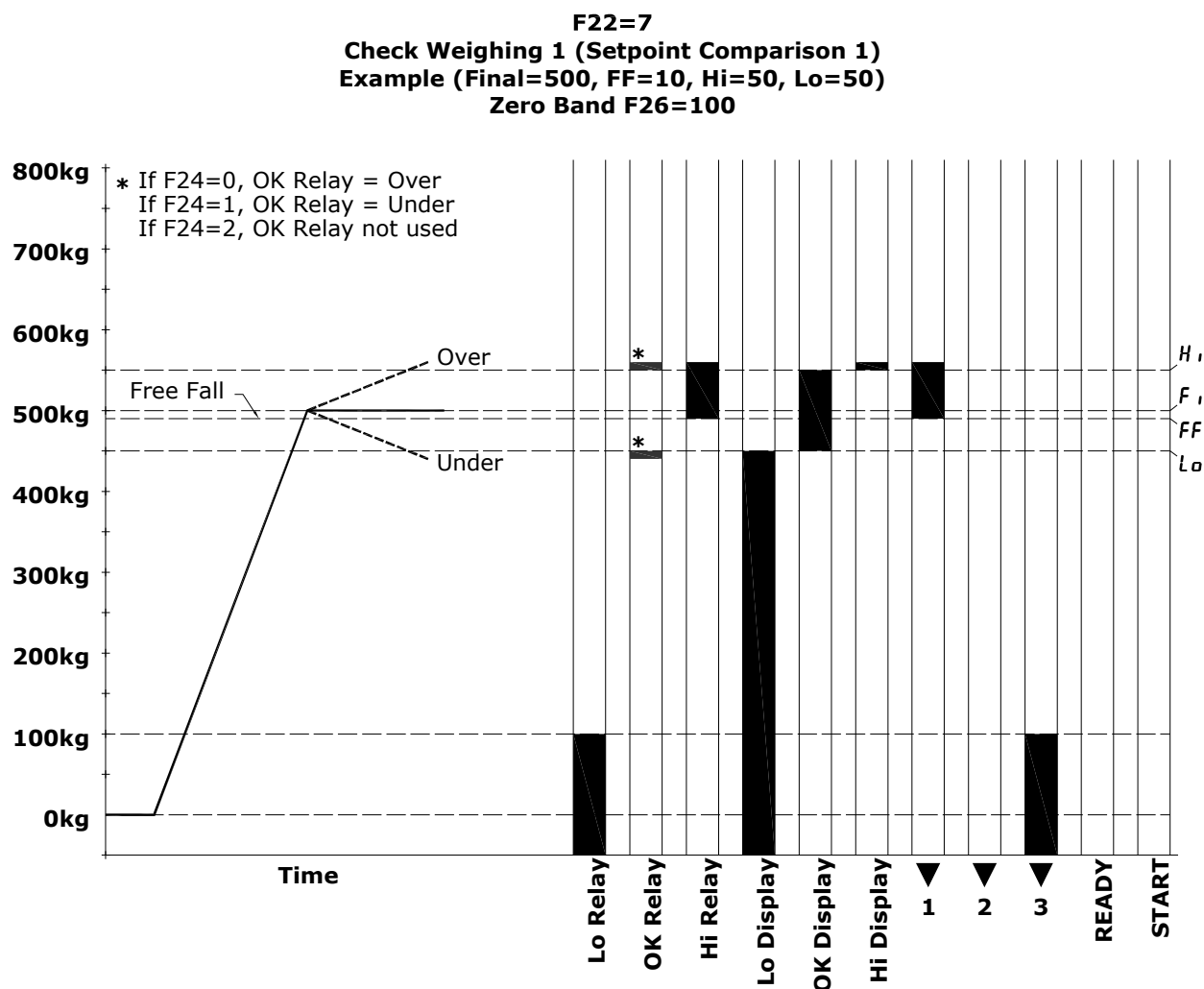
F24=0: OK relay active when OVER

F24=1: OK relay active when UNDER

F24=2: OK relay not used.

The BUZZER settings of Function F05 are available at all times, regardless of the F24 setting.

Check Weighing 1 (Setpoint Comparison 1 SINGLE FEED) Timing diagram



Check Weighing 2 (Setpoint Comparison 2 DUAL FEED)

Set Comparator Function, F22 to 8.

This batching mode allows for 2 speed weight batching into a weigh hopper.
START is not used. The weight must be tared by the user and the weight reading progresses in the positive direction. The Comparator settings are compared to the NET WEIGHT value.

Hi Relay is used to stop DRIBBLE FEED. Active when $NET \geq FINAL - FREE FALL$.

OK Relay is used to stop FAST FEED. Active when $NET \geq FINAL - PRELIM$.

Lo Relay is used for ZERO BAND. Active when $GROSS < F26$.

The OK Relay, controlling the FAST FEED output turns on when the Final-PRELIM. value is reached.

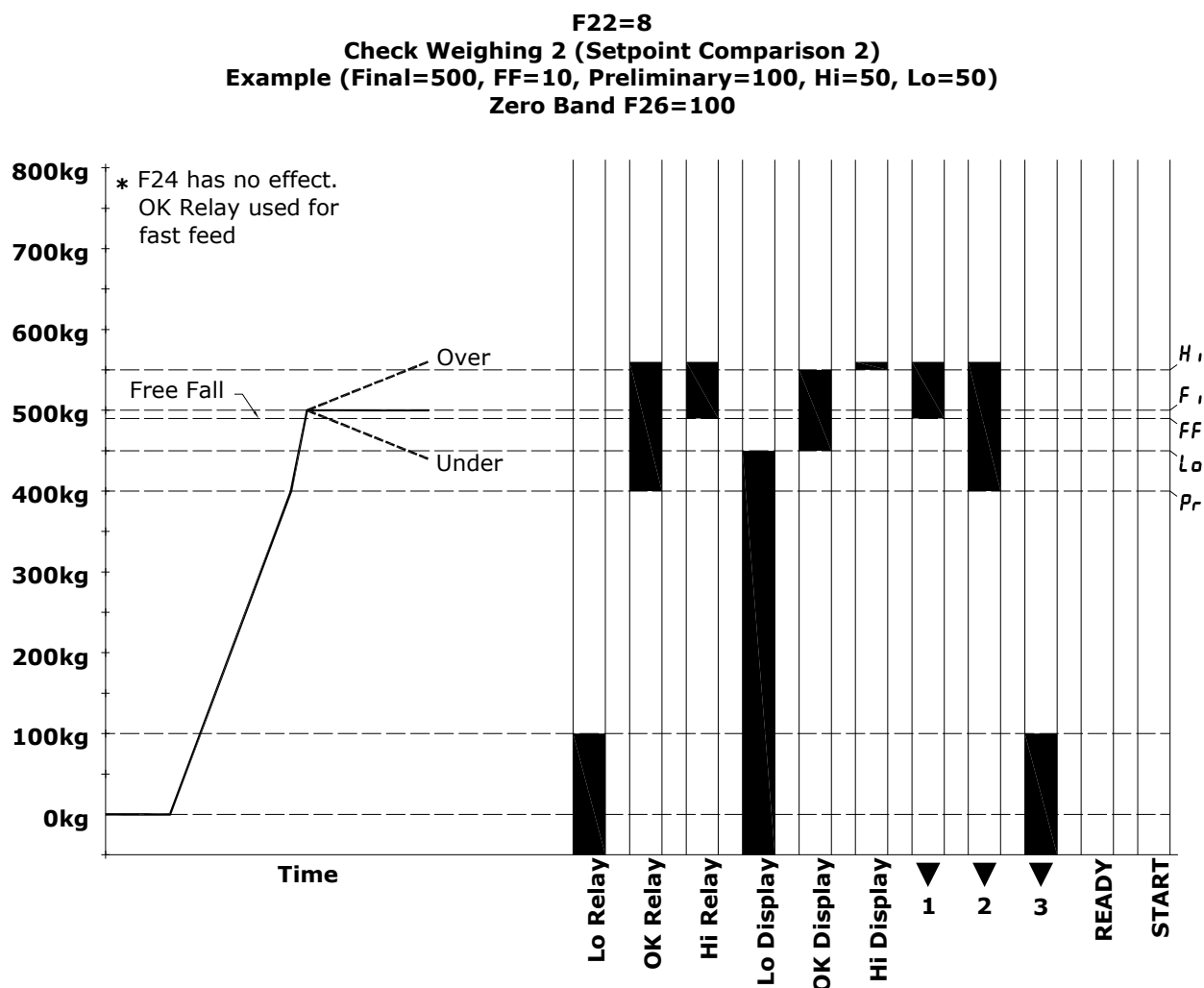
The Hi Relay, controlling the DRIBBLE FEED output turns on when the Final-Free Fall value is reached.

The READY indicator is not used.

Function F24 has no effect because the OK Relay is used for Dribble Feed.

The BUZZER settings of Function F05 are available at all times, regardless of the F24 setting.

Check Weighing 2 (Setpoint Comparison 2 DUAL FEED) Timing diagram



Check Weighing 3 (Setpoint Comparison Loss in Weight)

Set Comparator Function, F22 to 9.

This batching mode allows for Loss in Weight batching from a storage weigh hopper.

START is not used. The weight must be tared by the user and the weight reading progresses in the negative direction. The Comparator settings are compared to the NET WEIGHT value disregarding the minus sign.

The OK Relay can be used to control the filling of the hopper. If Function F24=2, the OK Relay will turn on when the Gross Weight reaches the FULL value when filling the hopper.

Hi Relay is used to stop SINGLE FEED. Active when the NET value \geq FINAL-FREE FALL.

OK Relay can be used for OVER, UNDER or FULL as per Function F24, (see below).

Lo Relay is used for ZERO BAND. Active when GROSS $<$ F26.

The Hi Relay turns on when the NET weight reaches the Final-Free Fall.

The READY indicator is not used.

Function F24 controls the OK relay output, which can be set as follows;

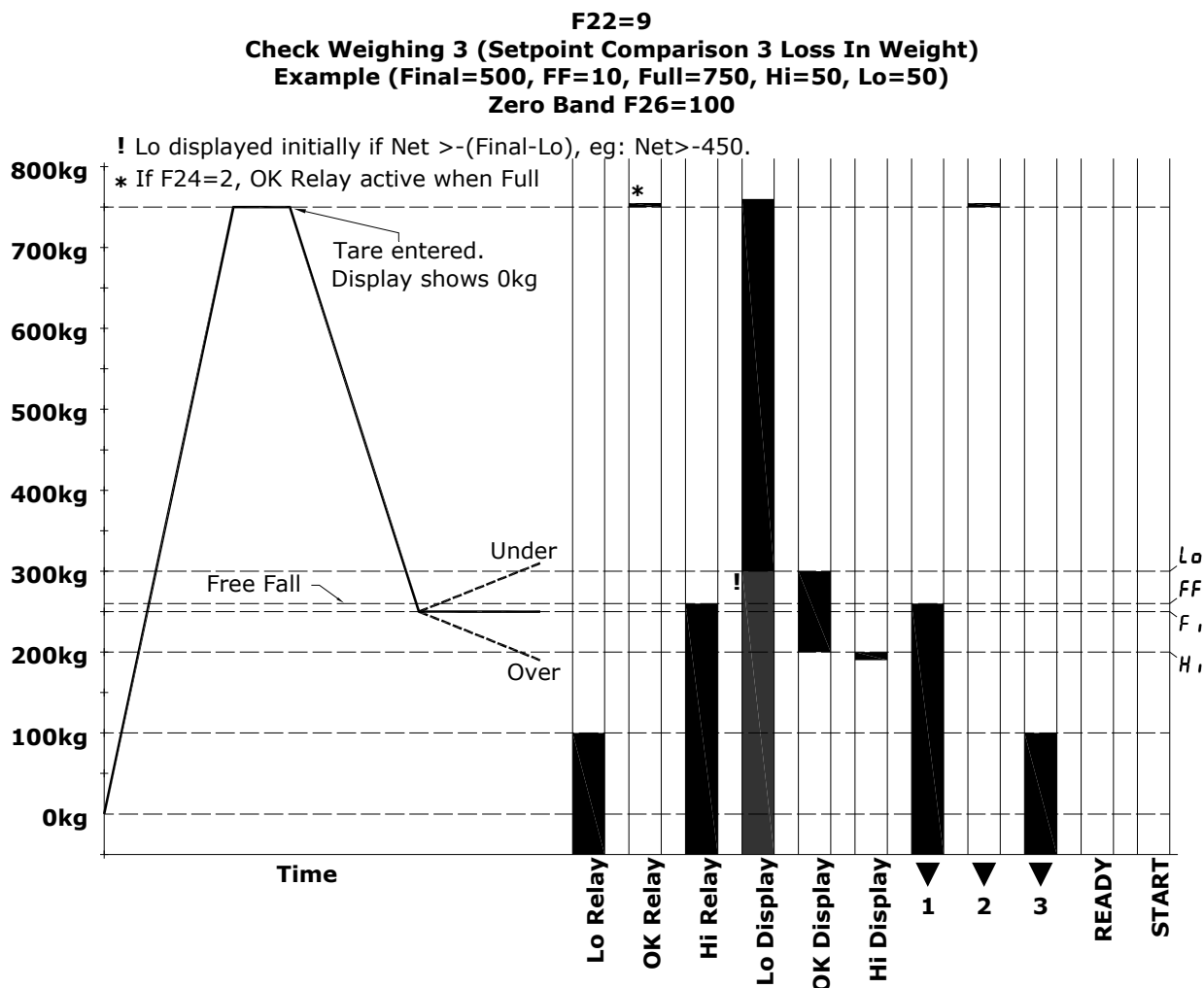
F24=0: OK relay active when OVER

F24=1: OK relay active when UNDER

F24=2: OK relay active when FULL. Active when GROSS \geq FULL.

The BUZZER settings of Function F05 are available at all times, regardless of the F24 setting.

Check Weighing 3 (Setpoint Comparison Loss in Weight) Timing diagram



Simple Batch 1 (SINGLE FEED)

Set Comparator Function, F22 to 10.

This batching mode allows for single speed weight batching into a weigh hopper. When the START is activated, the weight is tared and the weight reading progresses in the positive direction. The Comparator settings are compared to the NET WEIGHT value.

Hi Relay is used for SINGLE FEED. Active when $NET \leq FINAL-FREE FALL$.

OK Relay can be used for OVER, UNDER or BATCH FINISH as per Function F24, (see below).

Lo Relay is used for ZERO BAND. Active when $GROSS < F26$.

Before the batch can start, the weight must be either within ZERO BAND or if not within ZERO BAND the STOP must be activated to display the READY indicator, (NOT BLINKING).

The Hi Relay output turns on at START, controlling the single speed feed until the Final-Free Fall value, at which point it will turn off.

The READY indicator flashes at the end of a batch automatically if the batch weight does not finish within the ZERO BAND and F23, 2X is set to F23, 21. Activating STOP will cause the READY indicator to turn on and the OK, Hi, or Lo indicator will immediately turn off, ready for another batch start.

If the batch finishes within the ZERO BAND the READY indicator will turn on and the OK, Hi, or Lo indicator will immediately turn off, ready for another batch start.

The READY indicator will be on initially and will turn off at START.

Function F24 controls the OK relay output, which can be set as follows;

F24=0: OK relay active when OVER

F24=1: OK relay active when UNDER

F24=2: OK relay active when weight is stable at BATCH FINISH.

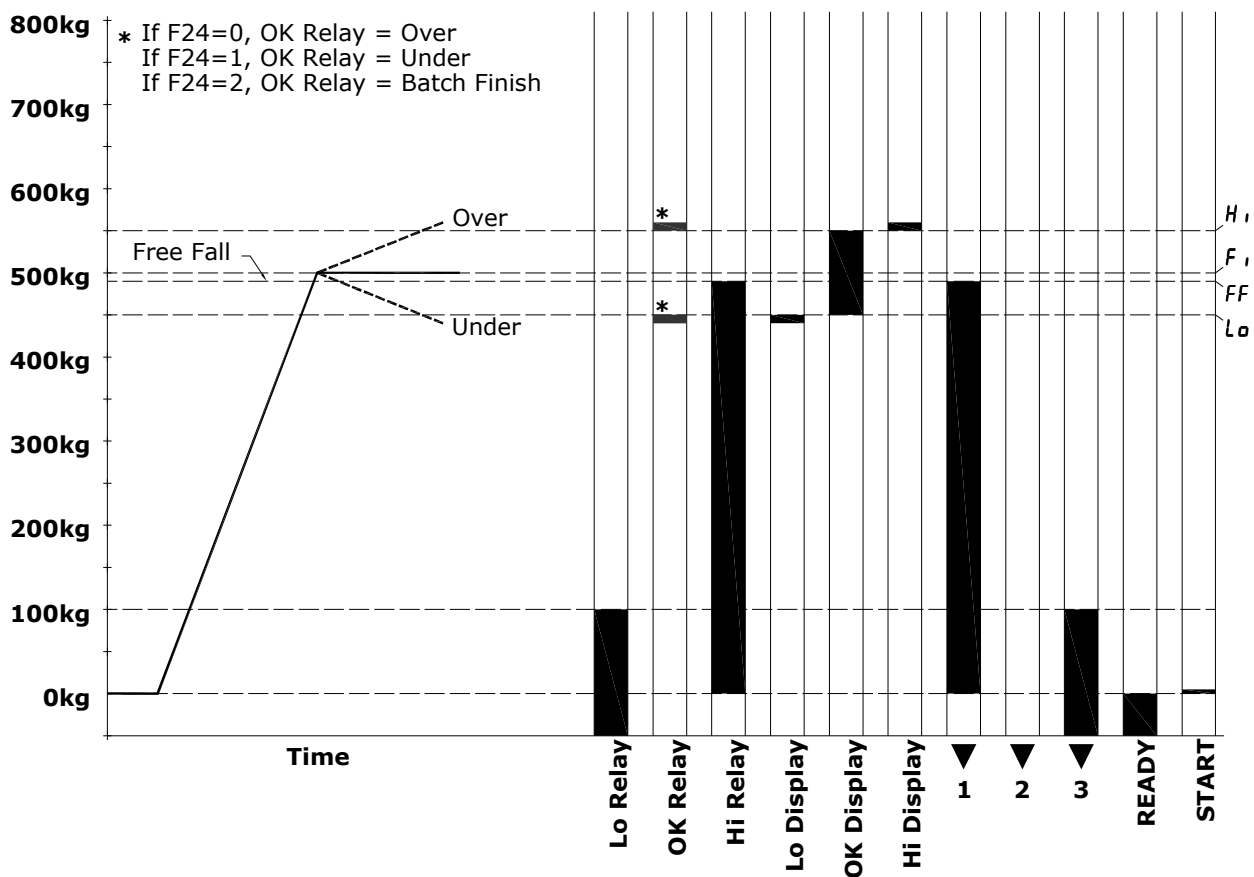
The BATCH FINISH will be active at the end of a batch until the BATCH FINISH timer, (F25), period ends or the weight returns to ZERO BAND.

If Function F25 is set to 0.0 then the BATCH FINISH will be active until ZERO BAND.

The BUZZER settings of Function F05 are available at all times, regardless of the F24 setting.

Simple Batch 1 (SINGLE FEED) Timing diagram

F22=10
Simple Batch 1
Example (Final=500, FF=10, Hi=50, Lo=50)
Zero Band F26=100



Simple Batch 2 (DUAL FEED)

Set Comparator Function, F22 to 11.

This batching mode allows for 2 speed weight batching into a weigh hopper. When the START is activated, the weight is tared and the weight reading progresses in the positive direction. The Comparator settings are compared to the NET WEIGHT value.

Hi Relay is used for DRIBBLE FEED. Active when $NET \leq FINAL-PRELIM$.

OK Relay is used for FAST FEED. Active when $NET \leq FINAL-FREE FALL$.

Lo Relay is used for ZERO BAND. Active when $GROSS < F26$.

Before the batch can start, the weight must be either within ZERO BAND or if not within ZERO BAND the STOP must be activated to display the READY indicator, (NOT BLINKING).

The Hi and OK Relay outputs turn on at START.

The OK Relay will control the Fast Feed until the Final-Preliminary value, at which point it will turn off.

The Hi Relay will control the Dribble Feed until the Final-Free Fall value, at which point it will turn off.

The READY indicator flashes at the end of a batch automatically if the batch does not finish within the ZERO BAND and F23, 2X is set to F23, 21. Activating STOP will cause the READY indicator to turn on and the OK, Hi, or Lo indicator will immediately turn off, ready for another batch start.

If the batch finishes within the ZERO BAND the READY indicator will turn on and the OK, Hi, or Lo indicator will immediately turn off, ready for another batch start.

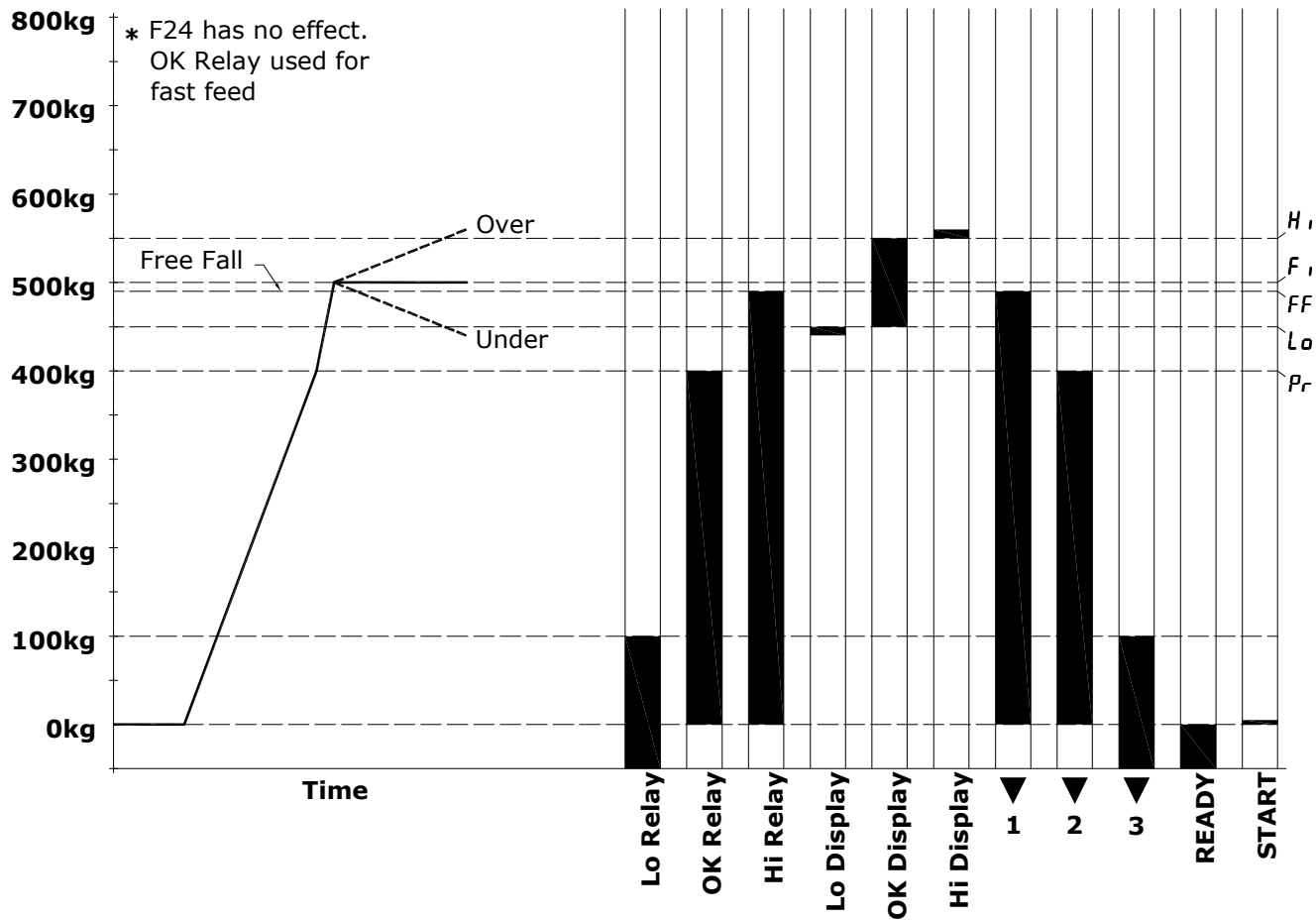
The READY indicator will be on initially and will turn off at START.

Function F24 has no effect because the OK Relay is used for Fast Feed.

The BUZZER settings of Function F05 are available at all times, regardless of the F24 setting.

Simple Batch 2 (DUAL FEED) Timing diagram

F22=11
Simple Batch 2
Example (Final=500, FF=10, Preliminary=100, Hi=50, Lo=50)
Zero Band F26=100



Simple Batch 3 (Loss in Weight)

Set Comparator Function, F22 to 12.

This batching mode allows for Loss in Weight batching from a storage weigh hopper. When the START is activated, the weight is tared and the weight reading progresses in the negative direction. The Comparator settings are compared to the NET WEIGHT value disregarding the minus sign.

The OK Relay can be used to control the filling of the hopper. If Function F24=2, the OK Relay will turn on when the Gross Weight reaches the FULL value when filling the hopper.

Hi Relay is used for SINGLE FEED. Active when $\text{NET value} \leq \text{FINAL-FREE FALL}$.
OK Relay can be used for OVER, UNDER or FULL as per Function F24, (see below).
Lo Relay is used for ZERO BAND. Active when $\text{GROSS} < \text{F26}$.

The Hi Relay output turns on at START, controlling the single speed feed until the Final-Free Fall value is reached.

The READY indicator will be on initially and will turn off at START.

The READY indicator flashes at the end of a batch automatically if the batch does not finish within the ZERO BAND and F23, 2X is set to F23, 21.

Activating STOP will cause the READY indicator to turn on and the OK, Hi, or Lo indicator will immediately turn off, ready for another batch start.

If the batch finishes within the ZERO BAND the READY indicator will turn on and the OK, Hi, or Lo indicator will immediately turn off, ready for another batch start.

Function F24 controls the OK relay output, which can be set as follows;

F24=0: OK relay active when OVER

F24=1: OK relay active when UNDER

F24=2: OK relay active when FULL. Active when $\text{GROSS} \geq \text{FULL}$.

The BUZZER settings of Function F05 are available at all times, regardless of the F24 setting.

Simple Batch 3 (Loss in Weight) Timing diagram

F22=12
Simple Batch 3 (Loss in Weight)
Example (Final=500, FF=10, Full=750, Hi=50, Lo=50)
Zero Band F26=100

