

\*\*\*\*\*

# CAS HFS SCALE

\*\*\*\*\*

## SERVICE MANUAL(HFS)

### TABLE OF CONTENTS

---

---

#### CHAPTER 1 GENERAL INTRODUCTION

---

---

- 1 - 1. INTRODUCTION
- 1 - 2. NAME OF EACH PARTS
- 1 - 3. SPECIFICATION

---

---

#### CHAPTER 2 PREPARATION FOR OPERATION

---

---

- 2 - 1. PREPARATION FOR OPERATION

---

---

#### CHAPTER 3 INSTALLATION

---

---

- 3 - 1. COMPOSITION OF HERCULES FLOOR SCALE

---

---

#### CHAPTER 4 TESTING

---

---

- 4 - 1. TOLERANCE LIMIT
- 4 - 2. SENSITIVITY TEST
- 4 - 3. LOAD CELL RESISTANCE TEST
- 4 - 4. FOUR POINT ADJUSTMENT OF LOAD CELL

---

---

## CHAPTER 1 GENERAL INTRODUCTION

---

---

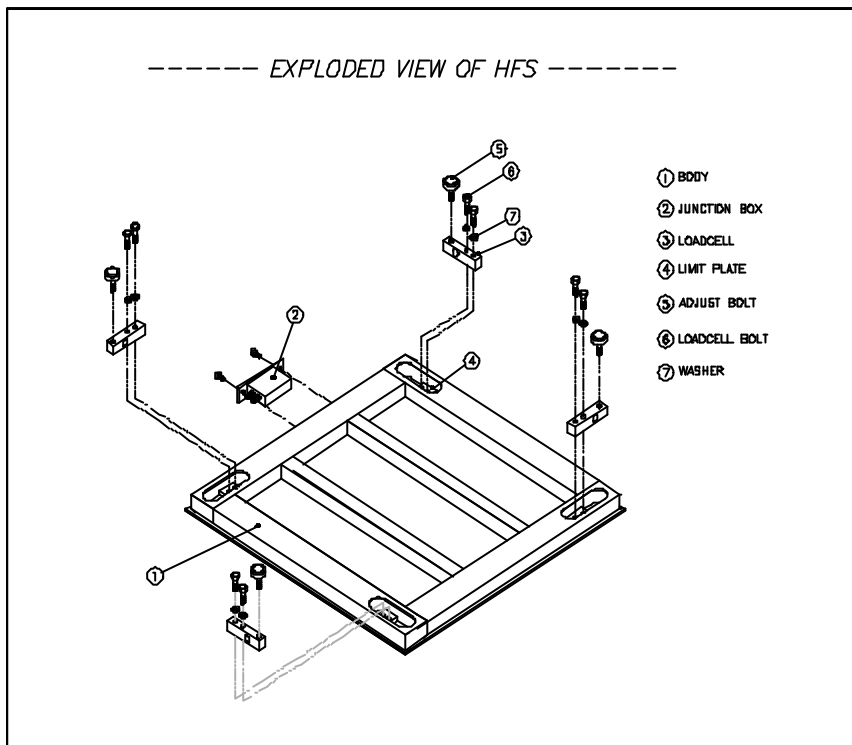
### 1 - 1. INTRODUCTION

This manual is the specification for the CAS HERCULES SCALE.

Main features are :

- 1) Four load cell(Full bridge) type.
- 2) Various capacity.
- 3) connectable to various indicator.

1 - 2. NAME OF EACH PARTS



### 1 - 3. SPECIFICATION

#### \* AMERICAN SPEC'

CLASSIFICATION	MODEL	DIMENSION(mm)	LOADCELL	CAPACITY
H-FLOOR SCALE(HFS)	2HFS33	914,4x914,4x90(3' x 3' x 3,5" )	BSA-500L-T	2000 lb
	5HFS44	1219,2x1219,2x90(4' x 4' x 3,5" )	BSA-01-T	5000 lb
	5HFS45	1219,2x1524x90(4' x 5' x 3,5" )	BSA-01-T	5000 lb
	10HFS44	1219,2x1219,2x90(4' x 4' x 3,5" )	BSA-02-T	10000 lb
	10HFS45	1219,2x1524x90(4' x 5' x 3,5" )	BSA-02-T	10000 lb
	10HFS46	1219,2x1828,8x90(4' x 6' x 3,5" )	BSA-02-T	10000 lb
	10HFS55	1524x1524x90(5' x 5' x 3,5" )	BSA-02-T	10000 lb
	10HFS56	1524x1828,8x90(5' x 6' x 3,5" )	BSA-02-T	10000 lb
	10HFS57	1524x2133,6x90(5' x 7' x 3,5" )	BSA-02-T	10000 lb

#### \* GENERAL SPEC'

CLASSIFICATION	MODEL	DIMENSION(mm)	LOADCELL	CAPACITY
H-FLOOR SCALE(HFS)	1HFS0808	800x800x90	BSA-500L-T	1000 kg
	1HFS1010	1000x1000x90	BSA-500L-T	1000 kg
	1HFS1012	1000x1200x90	BSA-500L-T	1000 kg
	2HFS1212	1200x1200x90	BSA-01-T	2000 kg
	2HFS1215	1200x1500x90	BSA-01-T	2000 kg
	2HFS1515	1500x1500x90	BSA-01-T	2000 kg
	3HFS1212	1200x1200x90	BSA-02-T	3000 kg
	3HFS1515	1500x1500x90	BSA-02-T	3000 kg
	3HFS1518	1500x1800x90	BSA-02-T	3000 kg
	5HFS1515	1500x1500x90	BSA-02-T	5000kg
	5HFS1518	1500x1800x90	BSA-02-T	5000kg
	5HFS1520	1500x2000x90	BSA-02-T	5000kg

---

---

## CHAPTER 2 PREPARING FOR OPERATION

---

---

### 2 - 1. PREPARING FOR OPERATION

- 1) Check the power source and match the voltage of converting switch to voltage of outlet.
- 2) Do not put excessive weight on this scale.
- 3) Keep the scale in dry place.

### 3 - 1. COMPOSITION OF HFS

#### A. COMPOSITION

Composed of 『LOAD CELLS(4EA)』 for sensing load, 『BODY』 which is receiving weight, and 『ADJUST FOOT』 to support load, and 『JUNCTION BOX』 sending load cell output to the indicator.

#### B. FUNCTION

##### 1) LOAD CELL

Generating electric output proportional to load

##### 2) BODY

It's the part to receive the objects which is measured

##### 3) ADJUST FOOT

It's the part for supporting load or adjusting level.

##### 4) JUNCTION BOX

It calculates each load cell's output and transmits it to the indicator.

##### 5) INDICATOR

Display weight value

(CAS Model A : CI-5010 etc)

---

---

CHAPTER 4      TESTING

---

---

4 - 1. TOLERANCE LIMIT

< MAXIMUM PERMISSIBLE ERROR >

CAPACITY	WEIGHT	MAXIMUM PERMISSIBLE ERROR
500kg ~ 1ton	BELOW 1/2 WEIGHT OF CAPACITY	ONE SCALE DIVISION(1e)
	OVER 1/2 WEIGHT OF CAPACITY	

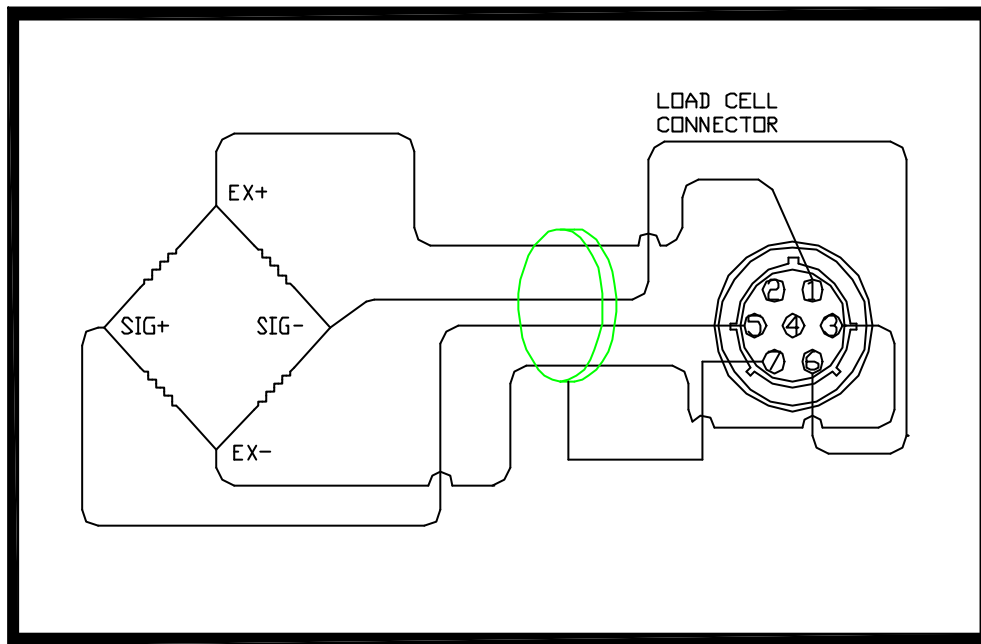
4 - 2. SENSITIVITY TEST

This is the test for output calibration of load cell

- a) weight : a quarter of full capacity.
- b) Adjust to make deviation among four points within +/-1 digit.

#### 4-3. LOAD CELL RESISTANCE TEST

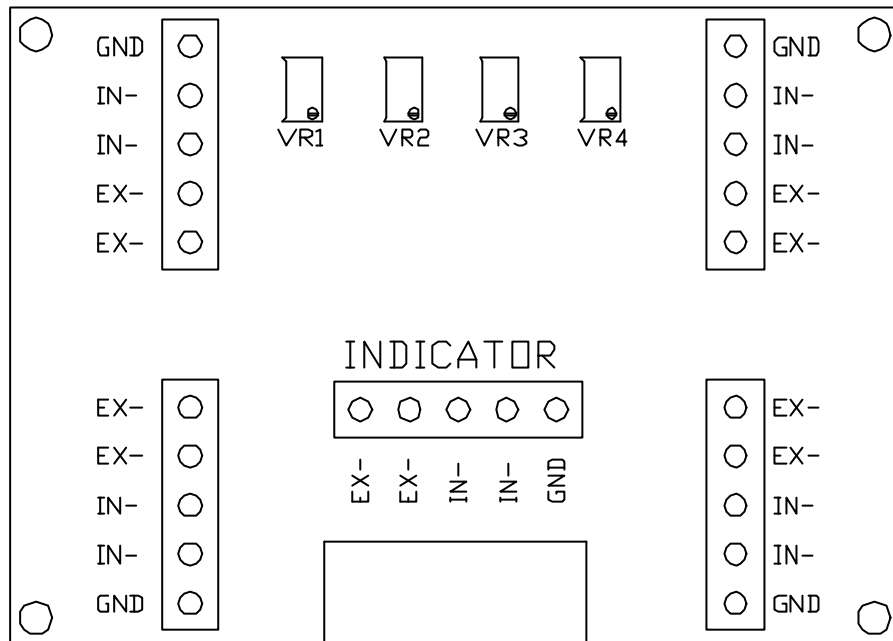
a) whiston bridge



- ① EX(+) : Excitation Voltage(+)
- ② EX(-) : Excitation voltage(-)
- ③ SIG(+) : Signal Voltage(+)
- ④ SIG(-) : Signal Voltage(-)



#### 4- 4. FOUR POINTS ADJUSTMENT OF LOAD CELL



- No.1 load cell is connected to V.R.I of box
- the weight deviation among four points should be within +/-1 digit by a quarter of full capacity weight
- When the deviation among four points on the body is over +/-1 digit, adjust variable resistor of junction box pertinently  
(example : If 100kg load is put on the platform, L/C outputs are as follow)  
L/C : 100.1/ No.2 : 100.2/ No.3 : 99.7 /No.4 : 100.0  
Increase No.3 V.R of junction box and decrease No.2 V.R and adjust by repeating