



## ***Zero-Point Adjustment Instruction (Initial)***

When either load cell or digital amplifier ( a.k.a Control Box for Turnover Protection System ) is replaced, do Zero-Point Adjustment as per the instruction.

### ***1, Place of load cell and Load Cell Amplifier***



Load Cell amplifier is in the cover



Load Cell is at the end of each outrigger cylinder. ( 4 Load Cells are on a crane )

### ***2, Replace Load Cell or Load Cell Amplifier***

Replace either or both Load Cell or/and Digital Amplifier as per Error Indicator on Digital Amplifier and main control box.



## ***Zero-Point Adjustment Instruction (Initial)***

### ***3, Preparation***

3-1, Turn the Turnover Alarm Switch on



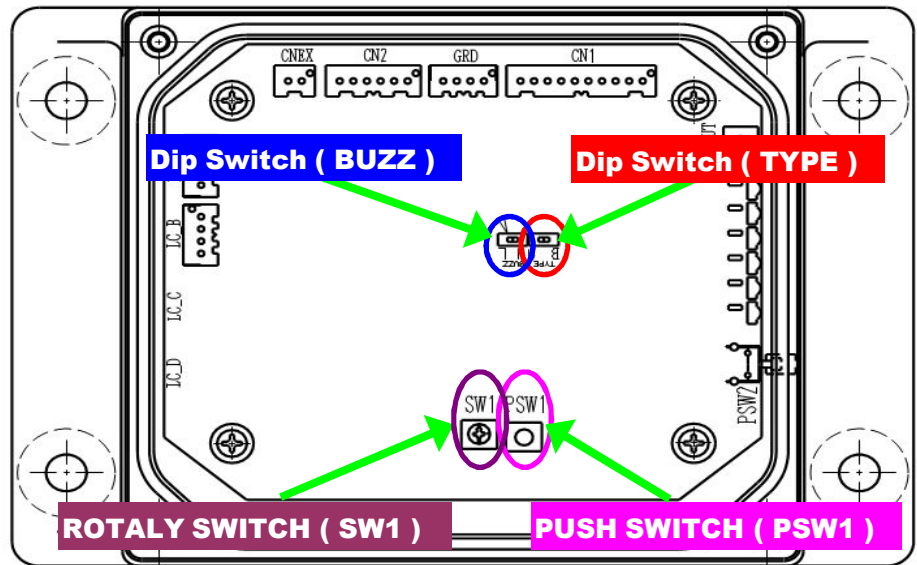
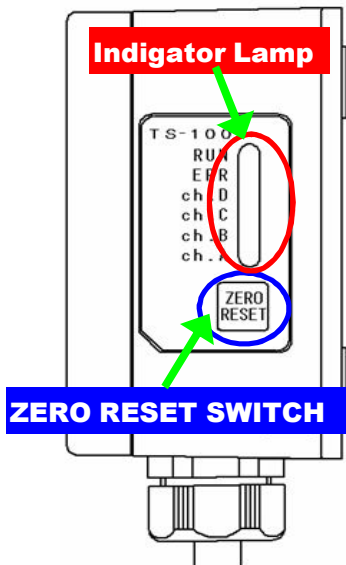
Turnover Alarm Buzzer

3-2, Open Load Cell Amplifier Cover



Load Cell Amplifier Cover

### ***4, Switches on / in Load Cell Amplifier***





## Zero-Point Adjustment Instruction (Initial)

### 5, Crane Model & Spec Code Setting

\* Crane Model Code only need to be re-set when Load Cell Amplifier has been replaced.

\* Crane Power has to be off during Crane Model Code is being set.

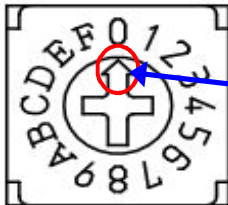
5-1, DIP SWITCH ( TYPE ) ---> "B" ( "A" is for UNIC Truck Mounted Crane Mode )

5-2, DIP SWITCH ( BUZZ ) ---> "H" ( Buzzer Level High ), "L" ( Buzzer Level Low )

5-3, ROTALY SWITCH ( SW1 ) ---> Refer to below list

ROTALY SWITCH ( SW1 )	CRANE MODEL	ROTALY SWITCH ( SW1 )	CRANE MODEL
0	UR-W094C	8	NOT USED
1	UR-W295C	9	NOT USED
2	UR-W375C	A	NOT USED
3	UR-W376C	B	NOT USED
4	UR-W505C	C	NOT USED
5	UR-W506C	D	NOT USED
6	NOT USED	E	NOT USED
7	NOT USED	F	NOT USED

#### ROTALY SWITCH ( SW1 )



\* Set the dial at suitable position. ( Left sample is for "UR-W094C" )



## ***Zero-Point Adjustment Instruction (Initial)***

### ***6, Zero-Point Adjustment***

- 6-1, Confirm all switches are set correctly.
- 6-2, Turn Crane main power on by starting Engine or Electric motor.
- 6-3, Confirm Crane hydraulic system is working.
- 6-4, Operate all outrigger cylinders fully extended to get load cells be stucked on outriggers.
- 6-5, Operate all outrigger cylinders fully retracted.
- 6-6, Confirm all outriggers are not on the ground.
- 6-7, Push "ZERO RESET SWITCH" and "PUSH SWITCH ( PSW1 )" together continuously for 5 seconds.
- 6-8, Confirm the adjustment has been done correctly.

< If you can find belows, the adjustment has been done Correctly >

- 1, All Indigator Lamps are lighting for 2 seconds.
- 2, Alarming for 2 seconds.
- 3, "RUN" Lamp is lighting in green
- 4, All "ch. A", "ch. B", "ch. C" and "ch. D" are blinking in orange.
- 5, Alarming "Peeeeeeeeee-----"  
( keep alarming until outriggers has been set correctly or cut the Alarm Switch off. )

< If you can find belows, the adjustment has **NOT** been done Correctly >

- 1, "ERR" Lamp is blinking in red.
- 2, Alarming "Pe Pe Pe Pe Pe-----"



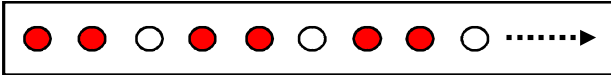
GO TO '7-1 & 7-2 to find a cause of the error.  
Do Zero-Point Adjustment again after the cause has been fixed.



## Zero-Point Adjustment Instruction (Initial)

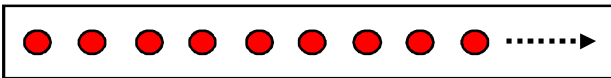
### 7, Zero-Point Adjustment ERROR

When "ERR" Lamp is blinking in red twice and twice, the cause is possibly come from belows.

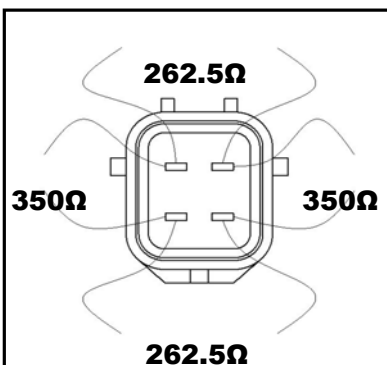


- 1, Zero-Point Adjustment has not done.  
--> Do Zero-Point Adjustment again.
- 2, Load cells are not connected correctly  
--> Connect all wiring correctly then do Zero-Point Adjustment again.
- 3, ROTALY SWITCH ( SW1 ) has been selected during Crane main power was on.
- 4, ROTALY SWITCH ( SW1 ) has been selected after Zero-Point Adjustment was done.  
--> Confirm all switches and do Zero-Point Adjustment again.

When "ERR" Lamp is blinking in red quickly, the cause is possibly come from belows.



- 1, Outriggers are on the ground.  
--> Operate all outrigger cylinders fully retracted and do Zero-Point Adjustment again.
- 2, Outrigger Cylinder is not working smoothly.
- 3, Load cell has been installed incorrectly such as right and left, wrong side.
- 4, Wiring from Load cell is jamming.
- 5, Outrigger or bracket are being deformed and Load cell can not receive the pressure.  
--> Fix the cause and do Zero-Point Adjustment again.
- 6, Wiring from Load cell to Load Cell Amplifier is snapping.  
--> Take resistances on all wiring from Load Cells to Load Cell Amplifier.  
( The wiring divided into 2 wirings on each outrigger and need to check both 2 wirings. )



If resistances are much bigger than left numbers which are like like 700Ω or 1000Ω, the wirings is snapping, the wiring need to be replaced.

Connector on Load cell wiring and Extension wiring



## ***Zero-Point Adjustment Instruction (Initial)***

### 7, Other

--> Replace load cell which has a problem and do Zero-Point Adjustment again.

**Which outrigger has a problem??**

"ch. A" is blinking in orange --> Load cell on outrigger 1

"ch. B" is blinking in orange --> Load cell on outrigger 2

"ch. C" is blinking in orange --> Load cell on outrigger 3

"ch. D" is blinking in orange --> Load cell on outrigger 4



## Zero-Point Adjustment Instruction (Daily)

Before start using UNIC crane which has turnover protection system,  
Check Turnover protection system.

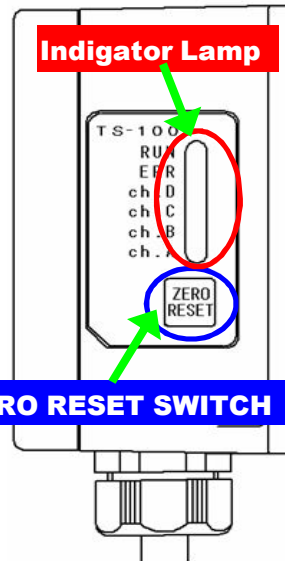
### 1, Place of each device



Load Cell amplifier is in the cover



Load Cell Amplifier



Turnover Alarm Switch





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## ***Zero-Point Adjustment Instruction (Daily)***



Load Cell is at the end of each outrigger cylinder. ( 4 Load Cells are on a crane )

### ***2, Zero-Point Adjustment***

- 2-1, Turn the Turnover Alarm Switch on.
- 2-2, Turn Crane main power on by starting Engine or Electric motor.
- 2-3, Confirm Crane hydraulic system is working.
- 2-4, Confirm all outrigger cylinders are fully retracted and outriggers are not on the ground.
- 2-5, Push "ZERO RESET SWITCH" continuously for 1 second.

< If you can find belows, the adjustment has been done Correctly >

- 1, All Indicator Lamps are lighting for 2 seconds.
- 2, Alarming for 2 seconds.
- 3, "RUN" Lamp is lighting in green
- 4, All "ch. A", "ch. B", "ch. C" and "ch. D" are blinking in orange.
- 5, Alarming "Peeeeeeeeeee-----"  
( keep alarming until outriggers has been set correctly or cut the Alarm Switch off. )

< If you can find belows, the adjustment has NOT been done Correctly >

- 1, "ERR" Lamp is blinking in red.
- 2, Alarming "Pe Pe Pe Pe Pe-----"



GO TO '3-1 & 3-2 to find a cause of the error.  
Do Zero-Point Adjustment again after the cause has been fixed.



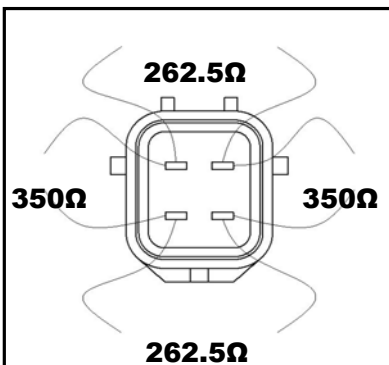


## Zero-Point Adjustment Instruction (Daily)

### 3, Zero-Point Adjustment ERROR

When "RUN" Lamp does not light and "ERR" Lamp is blinking in red, the cause is possibly come from belows.

- 1, Outriggers are on the ground.  
--> Operate all outrigger cylinders fully retracted and do Zero-Point Adjustment again.
- 2, Outrigger Cylinder is not working smoothly.
- 3, Load cell has been installed incorrectly such as right and left, wrong side.
- 4, Wiring from Load cell is jamming.
- 5, Outrigger or bracket are being deformed and Load cell can not receive the pressure.  
--> Fix the cause and do Zero-Point Adjustment again.  
If Loadcell need to be replaced, do Zero-Point Adjustment (Initial) after the replacement.
- 6, Wiring from Load cell to Load Cell Amplifier is snapping.  
--> Take resistances on all wiring from Load Cells to Load Cell Amplifier.  
( The wiring divided into 2 wirings on each outrigger and need to check both 2 wirings. )



If resistances are much bigger than left numbers which are like like 700Ω or 1000Ω, the wirings is snapping, the wiring need to be replaced.

#### Connector on Load cell wiring and Extension wiring

- 7, Other  
--> Replace load cell which has a problem and do Zero-Point Adjustment (Initial) again.

When "RUN" Lamp is lighting in green and "ERR" Lamp blinks in red for 5 seconds ( Not more than that ), Zero-Point Adjustment has been done correctry, so crane will work properly.  
But Load Cell will need to be replaced soon, so replace Load Cell as soon as possible.

#### Which outrigger has a problem??

- "ch. A" is blinking in orange --> Load cell on outrigger 1
- "ch. B" is blinking in orange --> Load cell on outrigger 2
- "ch. C" is blinking in orange --> Load cell on outrigger 3
- "ch. D" is blinking in orange --> Load cell on outrigger 4