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SAFETY PRECAUTIONS

For safe operation of the weighing indicator, please follow these instructions:

- Calibration inspection and maintenance of the indicator are prohibited by non-professional staff
- Please ensure that the indicator rests on a stable surface
- The indicator is a piece of static sensitive equipment; Please cut off power during electrical connections
- Touching the internal components by hand is prohibited
- DO NOT exceed the rated load limit of the unit
- DO NOT step on the unit
- DO NOT jump on the scale
- DO NOT use this product if any of the components are cracked
- DO NOT use for purposes other than weight taking
- To avoid damaging the battery do not keep charger plugged in once battery is fully charged
- Make sure the weight is not over the Max capacity as it could damage the load cell inside
- Material that has a static electric charge could influence the weighing. Discharge the static electricity of the samples, if possible. Another solution to the problem is to wipe both sides of the pan and the top of the case with an anti-static agent

Please take anti-static prevention measures

Any accumulated charge on the body of the human operator should be discharged first before opening the protective container with ESDS devices inside. The discharge can be accomplished by:

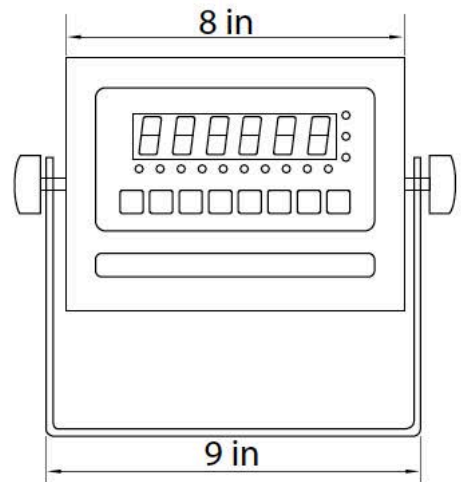
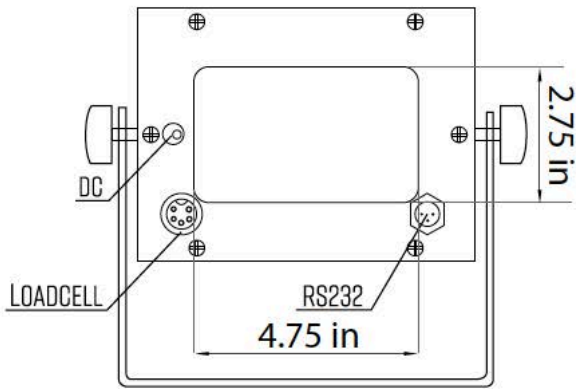
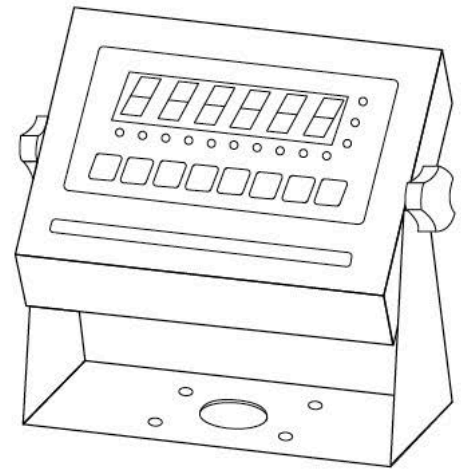
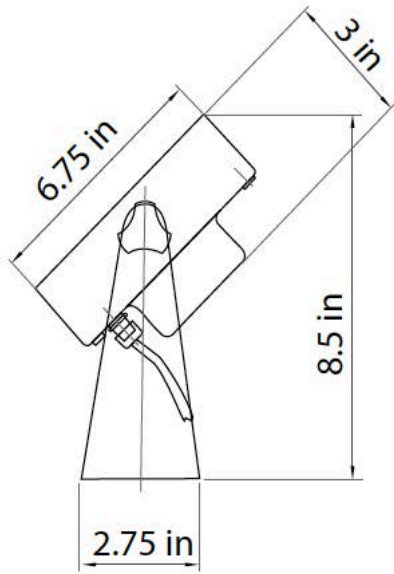
- Putting a hand on a grounded surface or, ideally, by wearing a grounded Anti-static Wrist Strap and an Anti-static Mat

PREPARATION & SET UP

- Plug into a wall outlet to avoid interference with other wirings
- Turn on the indicator while there is no load
- Calibration may be required before weighing when the scale is initially installed or moved from a location

SPECIFICATIONS

FIGURE 1: INDICATOR MEASUREMENTS



POWER SUPPLY

AC Adapter

If the indicator is powered by an adapter, plug the adapter directly into the “DC” pin located at the bottom of the indicator. We recommend to plug into a wall outlet to avoid interference with other wirings.



Battery (Optional)

If you have an indicator with the rechargeable battery option, please charge the internal battery fully before first time use. A 110 to 220V AC adapter should be provided with your indicator. Please use only the AC adapter provided to prevent damage to your indicator. To keep the battery in best condition, fully discharge the battery every month by leaving the indicator on until the indicator powers off, and then recharge fully. If the battery is not going to be used for a long period of time it is recommended to remove it to avoid leakage.

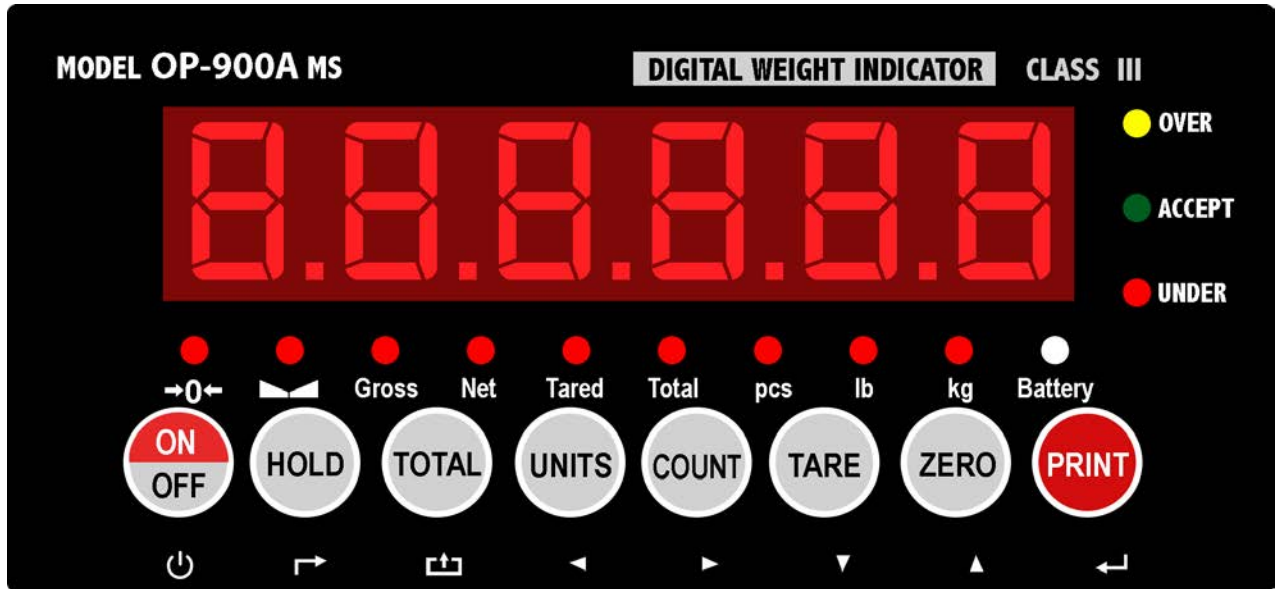
On OP-900A

- When the Battery is low the battery indicator light flashes red
- During charging the red light will stay lit
- The light will turn green once fully charged

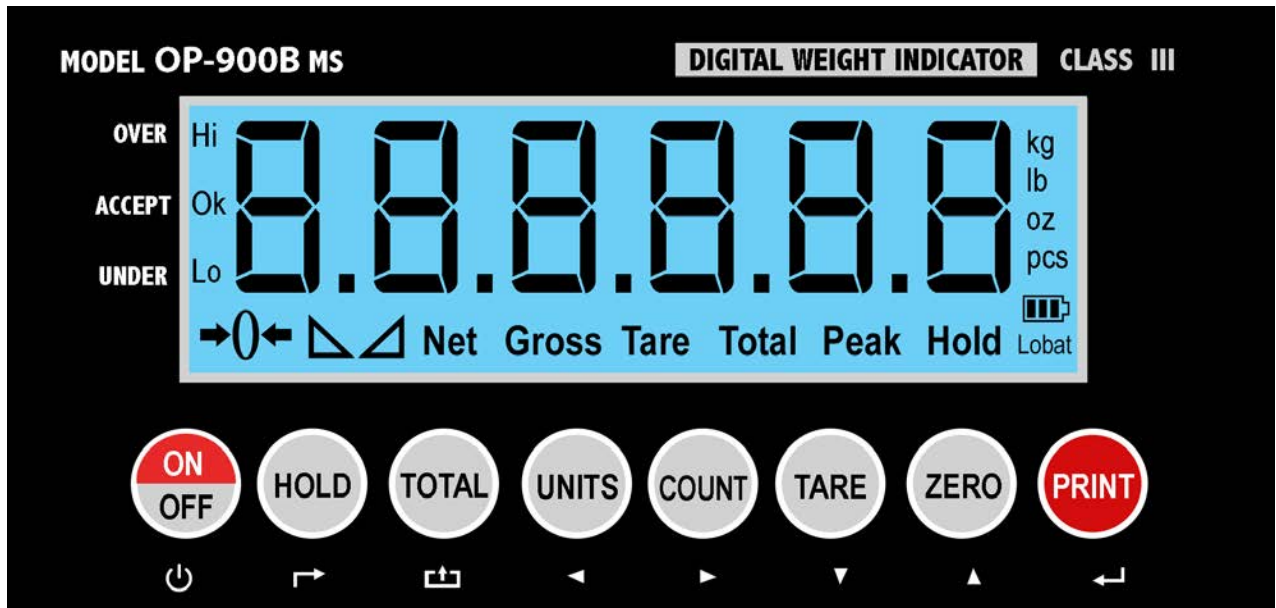
ON OP-900B

-  symbol will indicate battery's charge
-  symbol indicates that the battery needs to be charged

OP-900A (LED)



OP 900B (LCD)



OPERATING INSTRUCTIONS

Power On

- Turn on the power by pressing the power button for 2 seconds. Once on, the scale will flash the voltage and then begin to auto-check and count down from 0-9 sequentially before entering the weighing mode

Note: Anything on the scale before powering on will automatically be tared out.

Zeroing

- The zero function is used only when the scale is empty and is not at gross zero due to material build up
- Pressing the ZERO key will reset your scale to 0
- Depending on what your manual zero range parameter is set to, you can zero out any number within your set selection, after that you will receive an error and will need to tare out the weight

Unit Selection

- To switch between measuring units ((kg/g/lb/oz/lb:oz) press the UNITS key

Tare Function

- The Tare function is used when you only wish to see the current change in weight, not the entire amount of weight that is on the scale
- When the indicator is in gross mode (gross light is shown) pressing the TARE key will Tare the current weight on the scale and enter the net mode (net light shown)
- For example if you are using a container add the container to the scale, press tare and the display will show the tare symbol →0← and reset back to 0
- Add your product to the scale to weigh without the weight of the container
- To exit Tare mode press the TARE key again to enter gross mode and you will see the total weight of the container and the product

Note: If you remove the container the scale will show the minus weight of the container

To use a pre-set tare weight

- Press and hold the TARE key for 2 seconds
- Input the tare weight using the arrow keys
- Press print key to confirm

Function	Parameter	Settings/Options
Noise Filter	C29	0 = turn off noise filter 1 = 1 digital filter strength 2 = 2 digital filter strength 3 = 3 digital filter strength
Print Time and Date	C30	0 = yy.mm.dd 1 = mm.dd.yy 2 = dd.mm.yy 3 = yy.mm.dd
Analog Output Setting	C31	0 = 0 - 5V output 1 = 4 - 20mA output
Calibrate Current	C32	4 - 20mA current
Relay Output Setting	C33	0 = turn off relay output 1 = turn on relay output function 1 2 = turn on relay output function 2 3 = Reserved menu
Gravity of Calibration Location	C36	9.7000 - 9.9999
Gravity of Destination	C37	9.7000 - 9.9999
Version No.	C38	
Print Mode	C41	0 = auto mode 1 = gross mode 2 = tare mode
Print Carriage Return	C42	0 - 9 (How much space between print outs)
Space Print	C43	0 - 9 (Where the data prints on the paper: 0 = left ; 9 = right)
Date Print	C44	0 = do not print the date 1 = print the date
Time Print	C45	0 = do not print the time 1 = print the time

Table 2. Unit Conversion Parameter Settings

Parameter Settings	Units Available
C01= 3 & C12= 0	gram only
C01= 4 & C12= 0	oz only
C01= 1 & C12= 0	kg only
C01= 1 & C12= 1	kg/lb
C01= 1 & C12= 2	kg/lb/oz
C01= 1 & C12= 3	kg/lb/lb:oz/oz
C01= 1 & C12= 4	kg only
C01= 2 & C12= 0	lb only
C01= 2 & C12= 1	lb/kg
C01= 2 & C12= 2	kg/lb/oz
C01= 2 & C12= 3	kg/lb/lb:oz/oz
C01= 3 & C12= 4	lb only

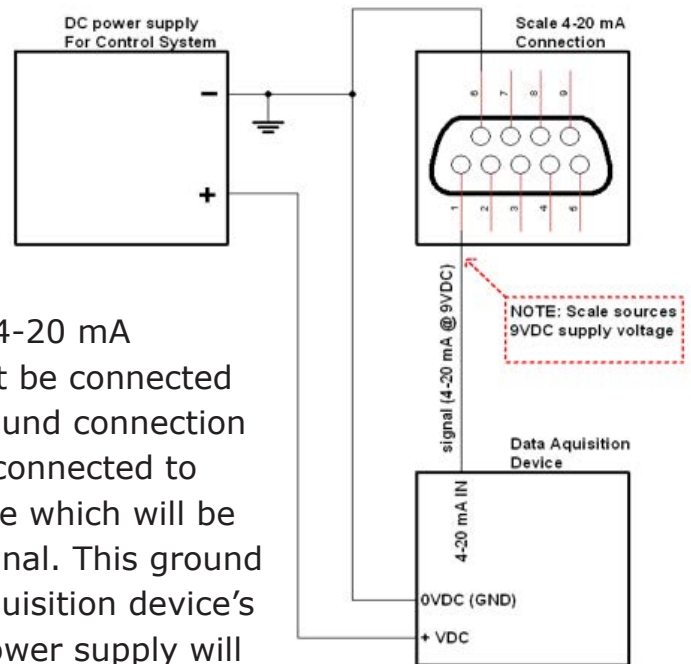
Table 3. Default Parameter Settings

Function	Parameter	Default Setting
Weighing Unit	C01	1
Decimal Setting	C02	0
Graduation Setting	C03	1
Maximum Capacity	C04	1000
Zero Calibration	C05	0
Calibration	C06	0
Restore Default	C07	0
Warning Tone	C08	1
Automatic Power Off	C09	0
Power Saving Mode	C10	0
Hold Function	C11	0
Unit Conversion	C12	1
Upper Limit Alarm	C13	000000
Lower Limit Alarm	C14	000000
Inner Code Display	C15	
Set Date	C16	
Set Time	C17	
Communication Setting	C18	0
Baud Rate	C19	3 (9600)
Manual Zero Range	C20	10
Initial Zero Range	C21	10
Zero Tracking	C22	0.5
Zero Tracking Time	C23	1
Overload Range	C24	9
Negative Display	C25	10
Standstill Time	C26	1
Standstill Range	C27	2
Digital Filter	C28	0
Noise Filter	C29	2
Print Time and Date	C30	0
Analog Output Setting	C31	1
Calibrate Current	C32	4
Relay Output Setting	C33	1
Multi-connection add.	C34	0
Wireless Communication	C35	6
Gravity of Calibration Location	C36	9.7936
Gravity of Destination	C37	9.7936

4-20 mA ANALOG OUTPUT (OPTIONAL)

The 4-20 mA analog output of the OP-900 scale is a voltage sourcing sensor that will output current which is proportional to the calibrated scale's weight range (i.e. 4 mA = 0 LBS and 20 mA = 10,000 LBS). It is important to note, that this is a sourcing output sensor (i.e. the sensor will source 9VDC with an output current range of 4-20 mA). Unlike many other "loop powered" type 4-20 mA sensors, an external supply voltage should not be connected to the unit's 4-20 mA circuit, however, the ground connection (pin 6) of the DB-9 connector will need to be connected to the same ground as the data acquisition device which will be responsible for interoperating the 4-20 mA signal. This ground connection is imperative, as both the data acquisition device's power supply and the scale's internal 9VDC power supply will need to be on the same ground plane for the output current to be synced and measured correctly. Please reference Figure 6 as a visual clarification on how to connect your scales 4-20 mA output to a data acquisition device.

FIGURE 6. CONNECTION DIAGRAM



Below is a list of important notes when using the indicator with the 4-20 mA option

- Resolution: 1/1000
- Outside Load: 100-350ohms
- Inside connection: load input port pin "1" of J2, ground port pin "GND" of J2
- Outside connection: load input port pin 1 of DB9, ground port pin 6 of DB9
- To test the connection, connect a 250 ohm load; Locate a volt meter, and probe across the 250 ohm load. As the weight input to the indicator varies, the voltage of the volt meter will change accordingly
- Pressing the TARE key will reset to output current to 4mA
- 0-20mA output can be set by setting parameter C31 to 0
- Please note that this option will disable the RS232 weigh data output (serial ASCII data) that comes in the standard indicator

Calibration:

- Press PRINT and HOLD key to go into configuration mode
- Go to C32 and press PRINT key
- The display should show [out-4] and output should be at 4mA
- Press the up/down arrow keys and the [out-#] will increase/decrease

Note: X corresponds to the output current. For example if out-12 is displayed, then 12mA should be the output. If not, press the left and right arrow key to adjust/calibrate

RELAY OUTPUT (OPTIONAL)

- The indicator can output 4 signals, which when connected to outside equipment, can perform an automatic control function and an upper/lower limit alarm function.
- Change parameter setting C33 following Table 6 below:

Table 6: Relay Output Parameter Setting

	Output Port	Port Definition	Function
C33=0	Out1	Turn off output function	No Output Signal
	Out2	Turn off output function	No Output Signal
	Out3	Turn off output function	No Output Signal
	Out4	Turn off output function	No Output Signal
C33=1	Out1	Turn on overload control function	Output overload control signal
	Out2	Turn on compliance control function	Output compliance control signal
	Out3	Turn on under-load control function	Output under-load control signal
	Out4	Turn on stable control function	Output stable control signal
C33=2,3	Preserved, no function		

Table 7 below shows the DB9 port pinout for the relay output option. Please note that this is optional and only available for the OP-900 indicator ordered with this option.

The relay output option will disable the RS232 weigh data output (serial ASCII data) that comes in the standard indicator.

Table 7: Relay Output Pin Definition

DP9 Pin	Definition	Port
1	1 st output signal pin	Out1
6	1 st output signal pin	Out1
2	2 nd output signal pin	Out2
7	2 nd output signal pin	Out2
3	3 rd output signal pin	Out3
8	3 rd output signal pin	Out3
4	4 th output signal pin	Out4
9	4 th output signal pin	Out4

Rating:

AC 250V 3A

DC 30V 3A

CONTACT US

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Please e-mail info@selletoncales.com for any support related questions.

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