SPARK
Drives & Automation

LINEAR WEIGHER CONTROLLER with LCD SCREEN

High Speed weighing of rice, pulses, cereals etc., with 1 gram accuracy.

SPARK DNA's Linear Weigher Controller - LWC is an ideal choice for weigh-metric applications mainly for food processing and packaging industry. It is designed with a high performance 32-bit ARM Microcontroller, Load Cell Amplifier, RS485 MODBUS RTU and application specific Inputs and Outputs. This module directly controls Vibrator drive or VFD drives using 0...10VDC outputs achieve target weight. Hence processing power of PLC is saved.

SPECIFICATIONS:

- ✓ Standard 24V Operation.
- ✓ 16x2 LCD display and Keypad for parameter setting and indication.
- ✓ Built-in RS-485 MODBUS RTU Communication.
- ✓ Load-cell calibration, Target grams, Coarse, Fine values and speed, Tare, Bucket open/close timings can be set easily using Keypad and LED Screen.
- ✓ Six digital inputs, six digital outputs, two analog outputs available for dedicated functions.
- ✓ Independently control a single head linear weigher machine
- ✓ Controls Vibrator drive or VFD drive directly using 0...10VDC outputs

CONNECTIONS:

WEIGHER CONTROLLER PIN DETAILS

SUPPLY		INPUT		LOADCELL INTERFACE				ANALOG OUTPUT		ANALOG OUTPUT		RS485	
24V	GND	TARE	GND	Ext+	Sig+	Sig-	Ext-	AOP1	GND	AOP2	GND	D+	D-

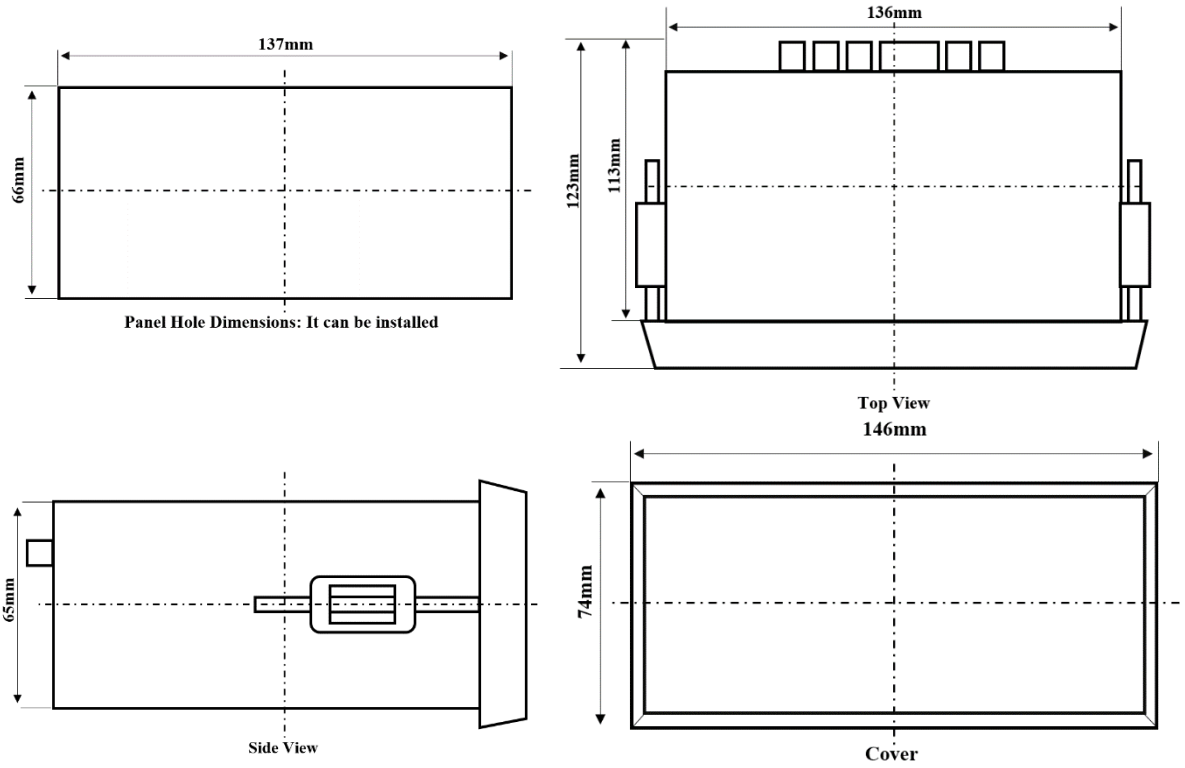
DIGITAL OUTPUT						DIGITAL INPUT					
DOP1	DOP2	DOP3	DOP4	DOP5	DOP6	DIP1	DIP2	DIP3	DIP4	DIP5	DIP6

Note:

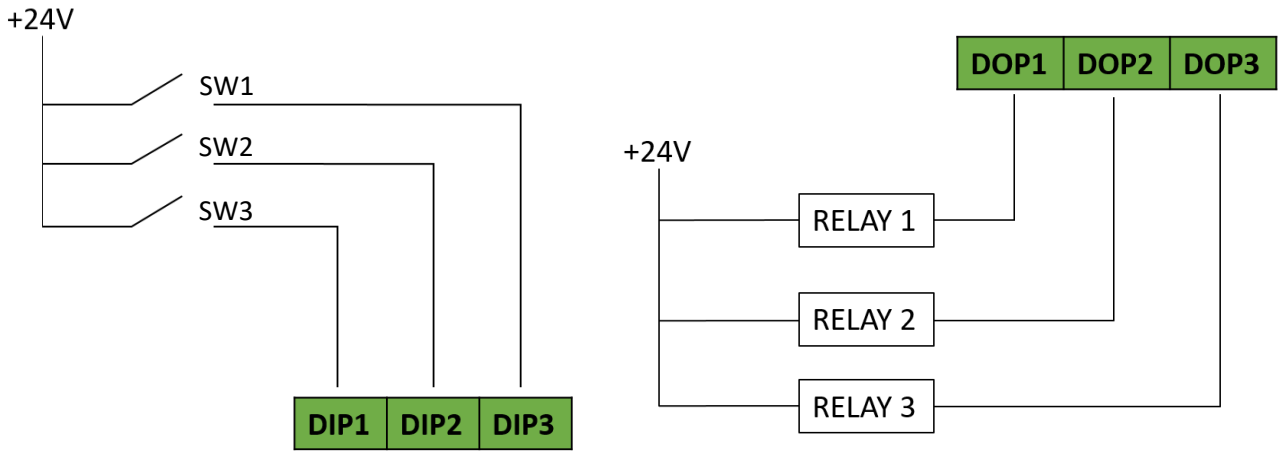
- All Digital inputs are PNP inputs.
- All Digital outputs are NPN outputs.
- AOP: 0-10Vdc

sales@sparkdna.in, +91 99428 66766
#44, Marvel Parambariam, Kalapatti Road, Saravanampatti,
Coimbatore, Tamilnadu, India 641035.

DIMENSIONS:



Example digital input/output connections.



Functions of I/O:

Digital Input	On	Off
DIP 1	Normal	Emergency Stop
DIP 2	Filling on	Filling off
DIP 3	Auto Dump on	Auto Dump off
DIP 4	Dump Signal	normal
DIP 5	Front Vibrator High material	Front Vibrator Low material
DIP 6	Bucket open Feedback	Bucket Closed Feedback

Digital Output	Status
DOP 1	Bucket open/Discharge
DOP 2	Filling complete
DOP 3	Bulk feed
DOP 4	Medium feed
DOP 5	Fine feed
DOP 6	Clamp

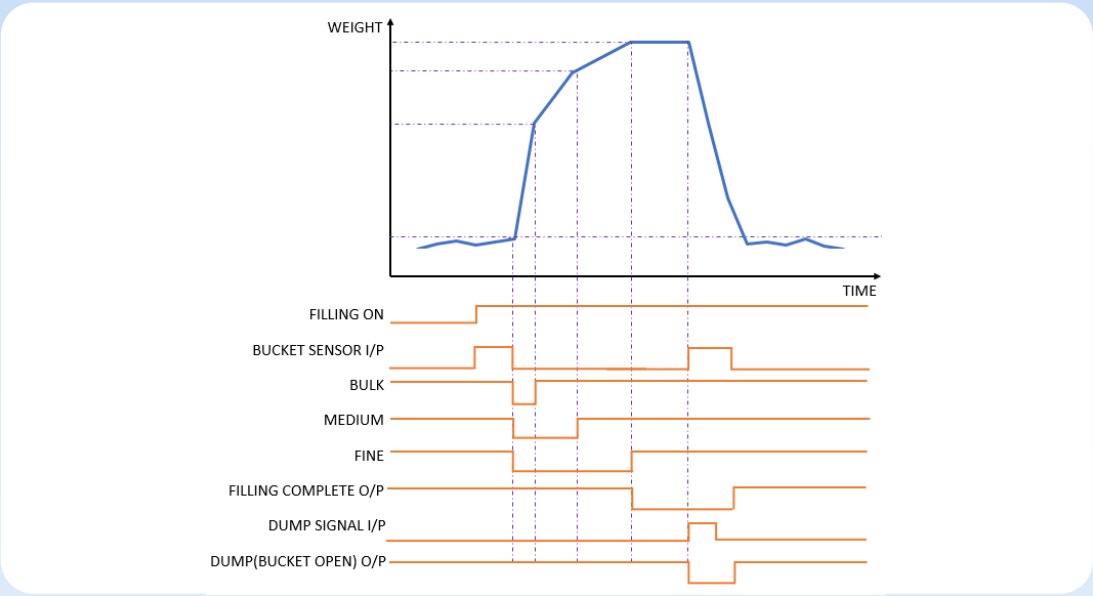
Analog Output	Status
AOP 1	Output for Front/Bulk -Vibrator controller/ VFD Drive
AOP 2	Output for back/Fine -Vibrator controller/ VFD Drive

Typical Application and Logic:

In order to make sure packing accuracy and improve the working efficiency, the controller will provide 3 filling speeds (Bulk, Medium, and Fine).

Additional, you can setup the Analog output AOP1, AOP2 (0-10VDC) to control the vibratory feeder, belt conveyor or screw conveyor with the respective Drivers.

The controller will discharge the material in the collection bucket when the weight reaches the target and Bucket open signal (DUMP SIGNAL) is detected.



sales@sparkdna.in, +91 99428 66766
#44, Marvel Parambariam, Kalapatti Road, Saravanampatti,
Coimbatore, Tamilnadu, India 641035.